

Buzzards Bay National Estuary Program

Implementation Activities

Federal FY 12 Funds Work Plan and Budget

Pursuant to Section 320 funding under
Cooperative Agreement CE-96144201 with the US EPA

For work beginning July 1, 2012 to June 30, 2014

Last modified: June 1, 2012

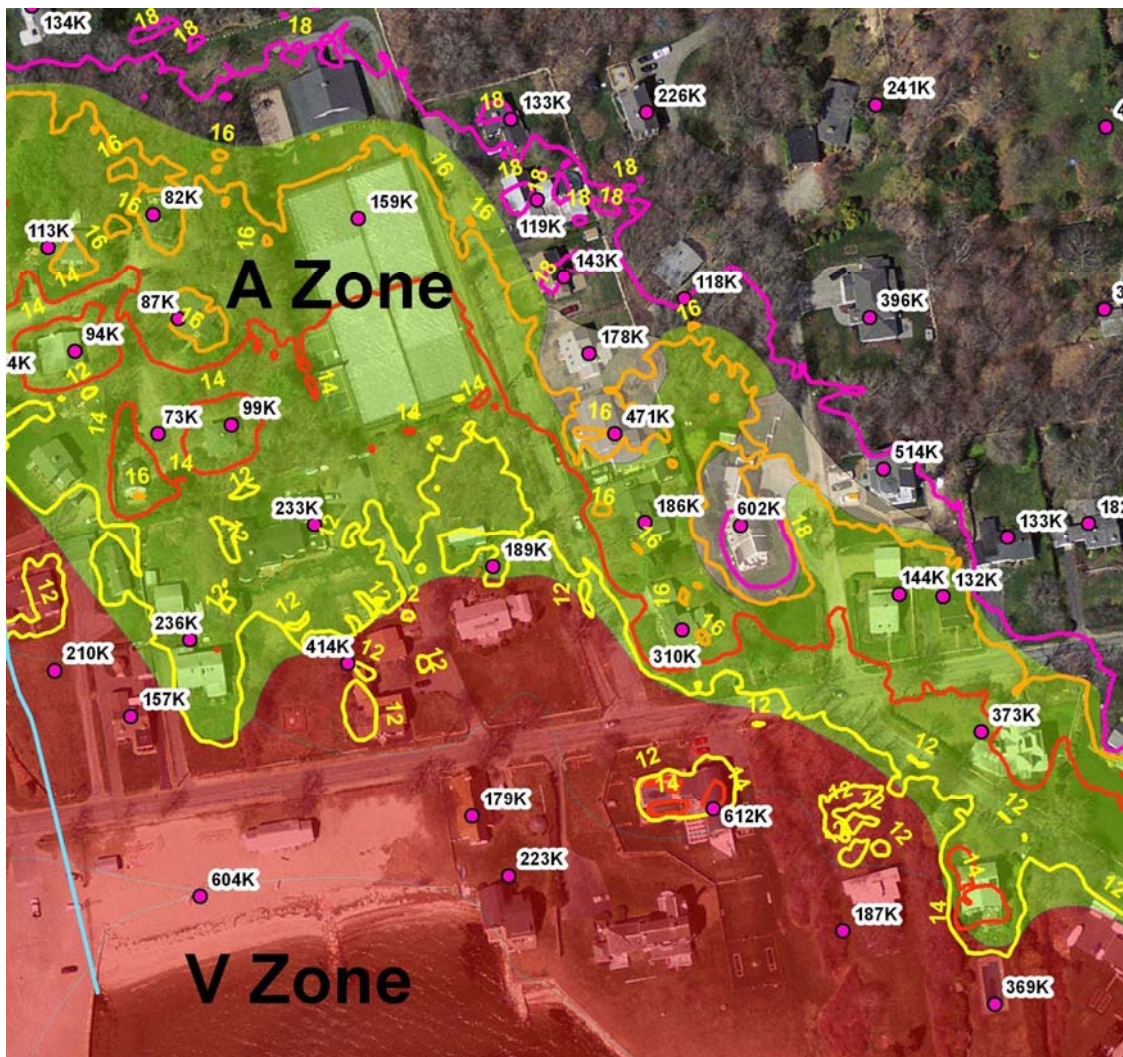


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Section 1: Introduction and Overview

Since the completion of the watershed management plan titled the *Buzzards Bay Comprehensive Conservation and Management Plan* (CCMP) in 1991, the ongoing focus of the Buzzards Bay National Estuary Program has been to facilitate implementation of the recommendations contained in this CCMP. This year, the US EPA has made available to the Buzzards Bay National Estuary Program \$597,200 in Clean Water Act Section 320 funds. For this work plan funding, the US EPA is continuing the existing Cooperative Agreement with the Commonwealth of Massachusetts.

When reviewing this work plan, it is important to recognize that this US EPA Cooperative Agreement to the Commonwealth does not fund all tasks described here, or utilize the full NEP allocation of funds. Specifically, the US EPA is awarding \$572,200 (\$597,200-\$25,000 Coalition monitoring) directly to the Commonwealth under this grant application and work plan. For the balance of the NEP section 320 funds, the US EPA, at the request of the Buzzards Bay NEP, will directly award \$25,000 to the citizens group, The Buzzards Bay Coalition, for specific tasks in the Buzzards Bay Citizen Water Quality Monitoring Program. The Buzzards Bay Coalition is directly providing the match under their separate grant agreement with the US EPA.

Some initiatives, like the USDA Natural Resource Conservation Service (NRCS) cost-share of personnel detailed to the Buzzards Bay National Estuary Program for technical assistance, are not considered match or a financial contribution under the terms of this Cooperative Agreement. Any grants or assistance from the Massachusetts Executive Office of Environmental Affairs (EEA) or Massachusetts Office of Coastal Zone Management (CZM) are not considered match to this award unless expressly identified in the “Match to Cooperative Agreement” section in the final Cooperative Agreement. Inclusion of any non-match efforts by other agencies in this work plan are meant to demonstrate the collaborative or coordinating role of the Buzzards Bay National Estuary Program in achieving specific recommendations contained in the watershed plan, the Buzzards Bay CCMP.

Federal FY 11 Funding	\$597,200
Base Funding (less Coalition Funding)	\$572,200
Coalition Water Quality monitoring*	\$25,000
Match (\$572,200 required)	\$573,200
* match to Coalition funding provided through that organization	

Section 2: FY11 Workplan Highlights and Accomplishments

Status of FY2011 Workplan, July 1, 2011 to present

In this section is a summary of the status of tasks in last year's workplan and a description of some key accomplishments by the BBNEP and our partners.

Task 1 - Wetland Restoration and Open Space Protection and Restoration

As we have done in the past, the Buzzards Bay NEP continues to work and collaborate with the Buzzards Bay Coalition, area lands trusts and municipalities in our ongoing effort to protect and restore valuable wetlands, and upland wildlife habitat throughout the Buzzards Bay watershed. Through this effort, the Buzzards Bay NEP provided maps, helped develop state and federal grant applications, wrote letters of partnership and support to granting agencies, conducted land use analyses, and through the municipal grant program, provided funds that help meet match requirements for leveraging grants from other programs (see Figure 1). The Buzzards Bay Coalition again had tremendous success in the past year coordinating grant efforts on several projects in the Buzzards Bay watershed, several of which received supporting funding or technical support by the Buzzards Bay NEP in the last or previous fiscal years.

For example, in 2011, the BBNEP awarded several open space and habitat protection grants including awards to Acushnet (LaPalme Riverside Farm Land Projection Project, \$18,652.66); and

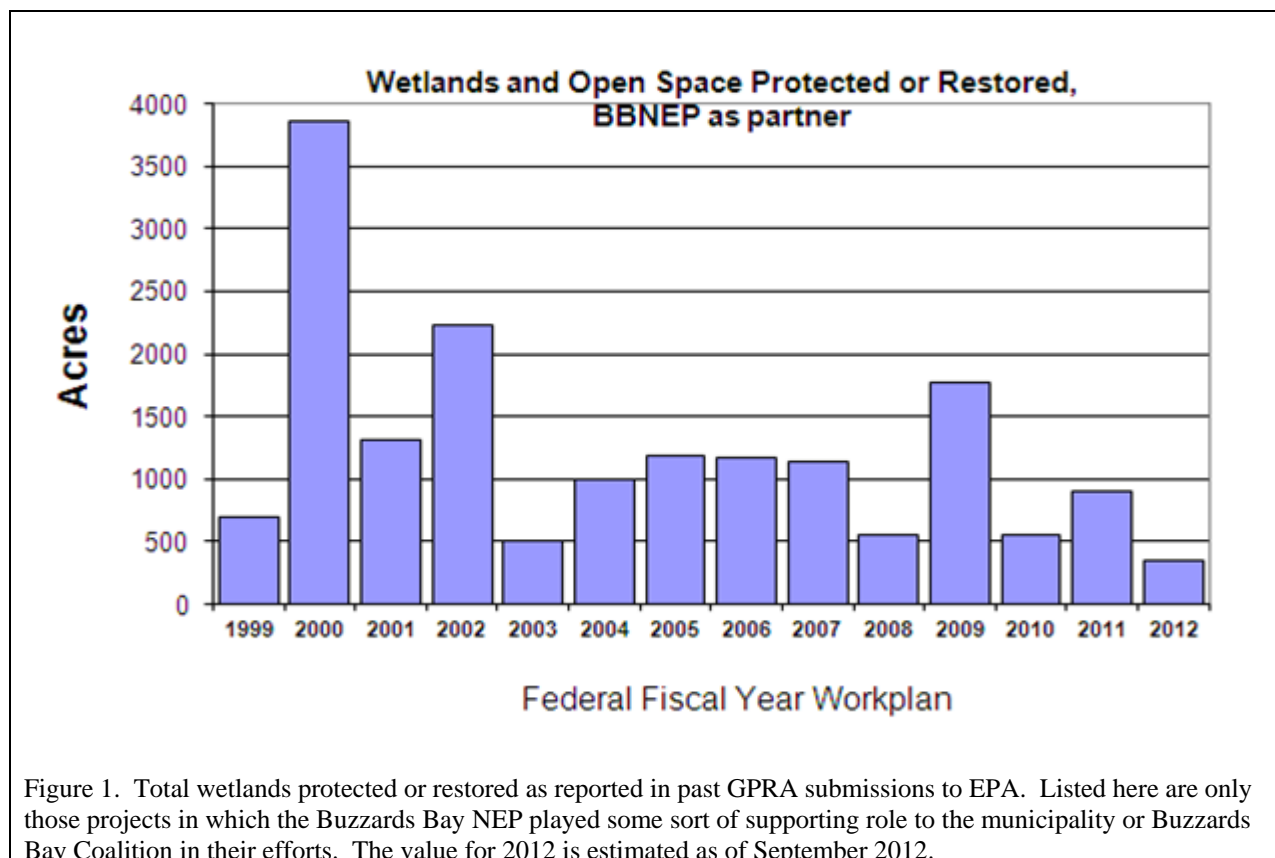


Figure 1. Total wetlands protected or restored as reported in past GPRAs to EPA. Listed here are only those projects in which the Buzzards Bay NEP played some sort of supporting role to the municipality or Buzzards Bay Coalition in their efforts. The value for 2012 is estimated as of September 2012.

Wareham (Weweantic River Corridor Land Protection Project, \$18,652.66). The LaPalme project award is noteworthy because it is another contribution to a long-focused effort over many years by the Town of Acushnet and the Buzzards Bay Coalition to protect and restore an important river corridor and restore the anadromous fish run in the Acushnet River. As noted in an April 12, 2012 press release on the Coalition's website, "the Buzzards Bay Coalition's long-planned restoration of the 19-acre Acushnet Saw Mill that straddles the River at the head of New Bedford Harbor, can come to fruition now that long-awaited funding has been released by the New Bedford Harbor Trustee Council. The restoration project will remove acres of pavement and create a natural edge to the river. It will also recreate much needed wetlands that will help filter pollutants before they enter the river. When completed, the site will have a visitor center and walking trails and serve as a tremendous public resource for the City of New Bedford and the Town of Acushnet."

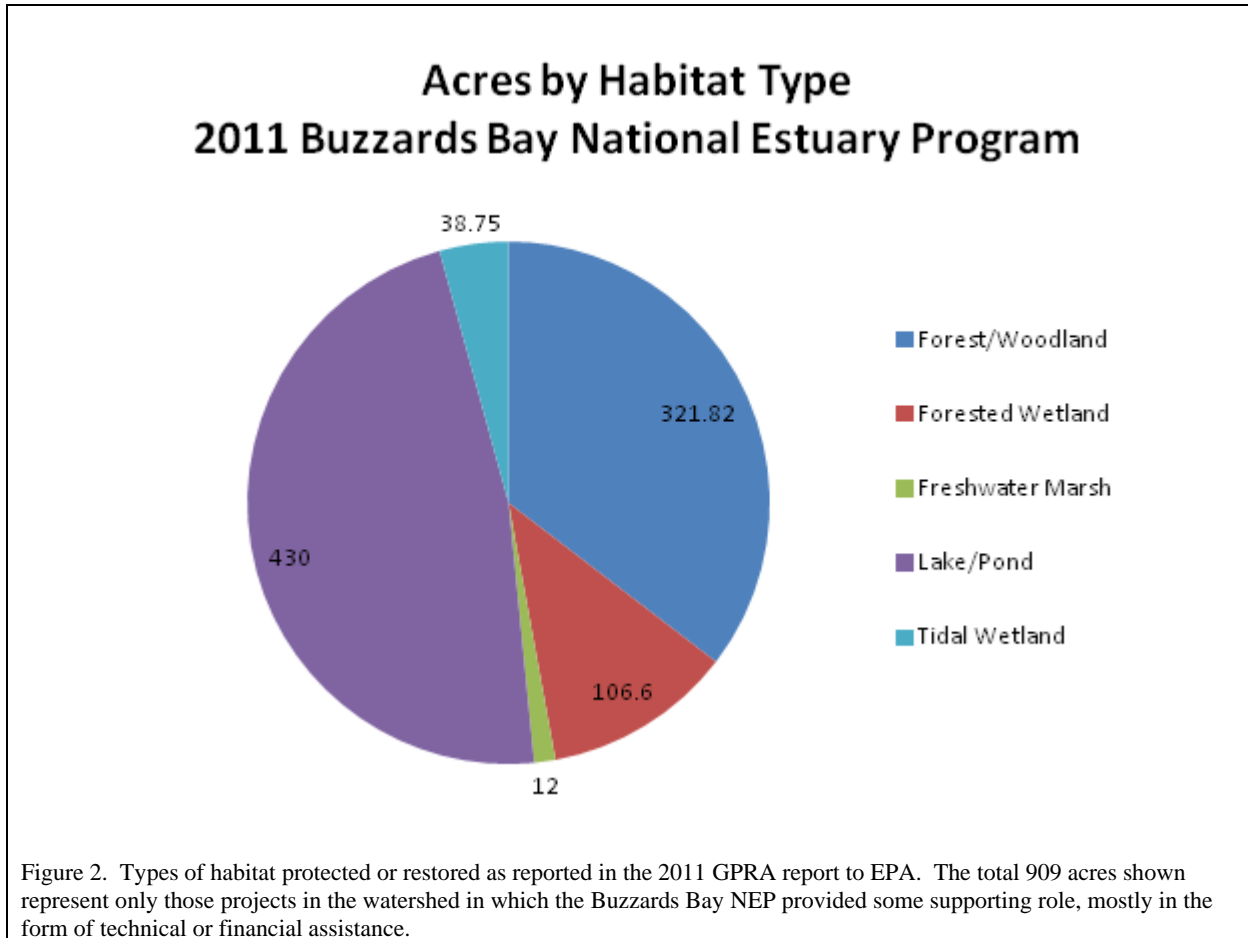
With respect to the 46-acre LaPalme acquisition, the award of funds by the Trustee Council, together with the anticipated approval of \$125,000 by the Acushnet Community Preservation Committee at the June 4, 2012 Acushnet Town Meeting is one of the contributing projects summarized in Figure 1.

The Tripps Mill Brook II project in Mattapoisett is another project in which the Buzzards Bay NEP provided both financial assistance and technical assistance in the form of maps and information used for the acquisition of open space containing important habitat and natural resources. In February 2011, the Town of Mattapoisett acquired 42.67 acres of land along Tripps Mill Brook, a tributary of the Mattapoisett River. The Mattapoisett River supplies drinking water to five Buzzards Bay communities. This project was an initiative of the town and the Buzzards Bay Coalition, which helped facilitate the project. The Buzzards Bay NEP provided \$45,000 toward the acquisition. Additional funding came from Community Preservation Act funding totaling \$320,000, and funding from the state (\$85,000 from a State Conservation Partnership grant), and private funds. Protection of these properties is part of an ongoing multi-year effort led by the Bay Coalition in partnership with the Towns of Fairhaven and Mattapoisett, the Water Supply Protection Advisory Committee and the Mattapoisett Land Trust, which has protected 354 contiguous acres within the Mattapoisett River Valley. Many of these earlier projects also received Buzzards Bay NEP grants and technical assistance that helped secure the acquisitions. The larger project includes upland forests, swamps, and marshes. Also included is a retired cranberry bog that will be transitioned to natural wetlands as part of a restoration project on the site. Wind-ing through is Tripps Mill Brook a stream flowing from its headwaters in Acushnet to the Mattapoisett River.

Another representative initiative is the Leonards Pond Anadromous Fishway Improvement Project. In December 2010, the Town of Rochester, working in conjunction with the Division of Marine Fisheries, Alewives Anonymous, the Buzzards Bay Coalition, and a private landowner replaced an inefficient fishway at the Leonards Pond Dam in an effort to provide safe passage for anadromous fish up into the pond. Leonards Pond offers the greatest area of potential spawning habitat on the Sippican River system; however, due to competing attraction flow from the dam spillway, river herring were failing to get past the dam. Instead, herring were returning downstream to Hathaway Pond to spawn, never making it to Leonards Pond. Using \$20,000 in Buzzards Bay NEP funding, the town hired an engineer to produce detailed site plans and construc-

tion specifications, and hired had a contractor to remove and replace the fishway. The Division of Marine Fisheries donated two Alaskan Steep pass sections to the project, valued at \$15,000.

In Figure 2 we shows a summary of habitat type protected on the various projects in which the Buzzards Bay NEP was involved in some form of supporting role as reported in the 2011 GPRA report.



Throughout the year, the BBNEP wetland specialist provided technical review of projects for area conservation commissions including onsite field visits for the Fairhaven Conservation Commission. The Buzzards Bay NEP also prepared a brochure to accompany the release of the updated Buzzards Bay CCMP.

Task 2 - Buzzards Bay Stormwater Mapping, Atlas and Database Update

The BBNEP continued its work to assist municipalities to map stormwater drainage networks for meeting the anticipated new Phase II MS4 permit, upon request. In 2012, the Buzzards Bay NEP posted GIS files and easy-to-use Google Earth files, including maps of the New Bedford stormwater network, on its stormwater atlas page (<http://www.buzzardsbay.org/stormatlas.htm>). This map product enables those without any GIS experience or software to easily produce maps of specific areas of the watershed (see Figure 3). We also continue to make available through our

website LIDAR GIS files to assist towns and engineers with stormwater planning and design efforts.

Task 3 - Stormwater Remediation and Technical Assistance

Through our grant and technical assistance programs, the Buzzards Bay NEP helps towns develop stormwater treatment designs which lay the foundation for the construction and implementation of those designs through municipal funding, or through grant programs such as 319 non-point source grants, or MA CZM's CPR program. For example, an important success announced in 2011 was that the Town of Westport, using stormwater designs developed with BBNEP guidance and funding, received a \$234,096 319 NPS grant to treat stormwater at the Westport Middle School using a variety of stormwater best management practices. The Buzzards Bay NEP collaborated with the Westport River Watershed Alliance and the Town of Westport on this project, and the history of the effort is described on this webpage:

<http://wrwa.com/whats-being-done/>.

Actual construction of the designs will commence later in 2012.

In August 2011, municipal minigrants of \$20,000 each were awarded to the Town of Bourne (\$20,000) for the preparations of designs for stormwater treatment at Buttermilk Way, and to the Town of Westport, for designs for stormwater runoff from River Road on the West Branch of the River.

At the Town of Bourne site, designs are needed to treat stormwater discharging bacteria and other pollutants to Cohasset Narrows at the mouth of Buttermilk Bay (Figure 4). In partnership with the Town of Bourne, the BBNEP will oversee and administer the engineering contract. Through meetings and a preliminary site investigation, the BBNEP determined there was inadequate space on the public road layout to treat stormwater designs for this site. The BBNEP and the Town reached out to the Massachusetts Maritime Academy to propose using one of their student parking lots as a site to treat stormwater. Once this approach was worked out, the BBNEP issued

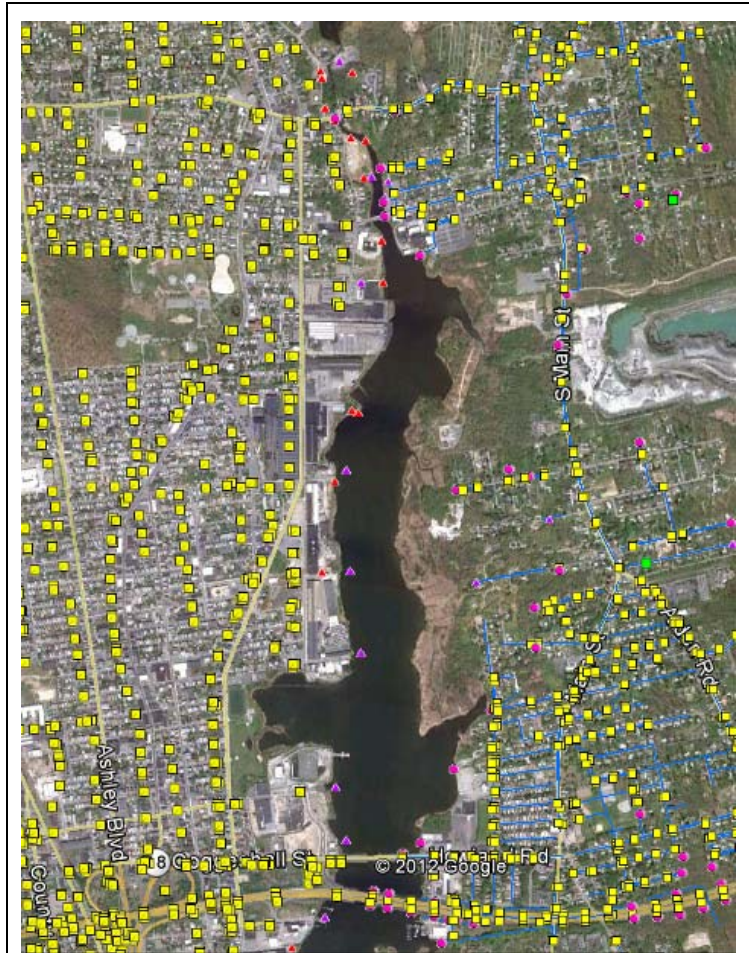


Figure 3. In 2012, the Buzzards Bay NEP converted stormwater atlas files into Google Earth files so those without GIS software or knowledge can easily make maps and identify discharges in their community.

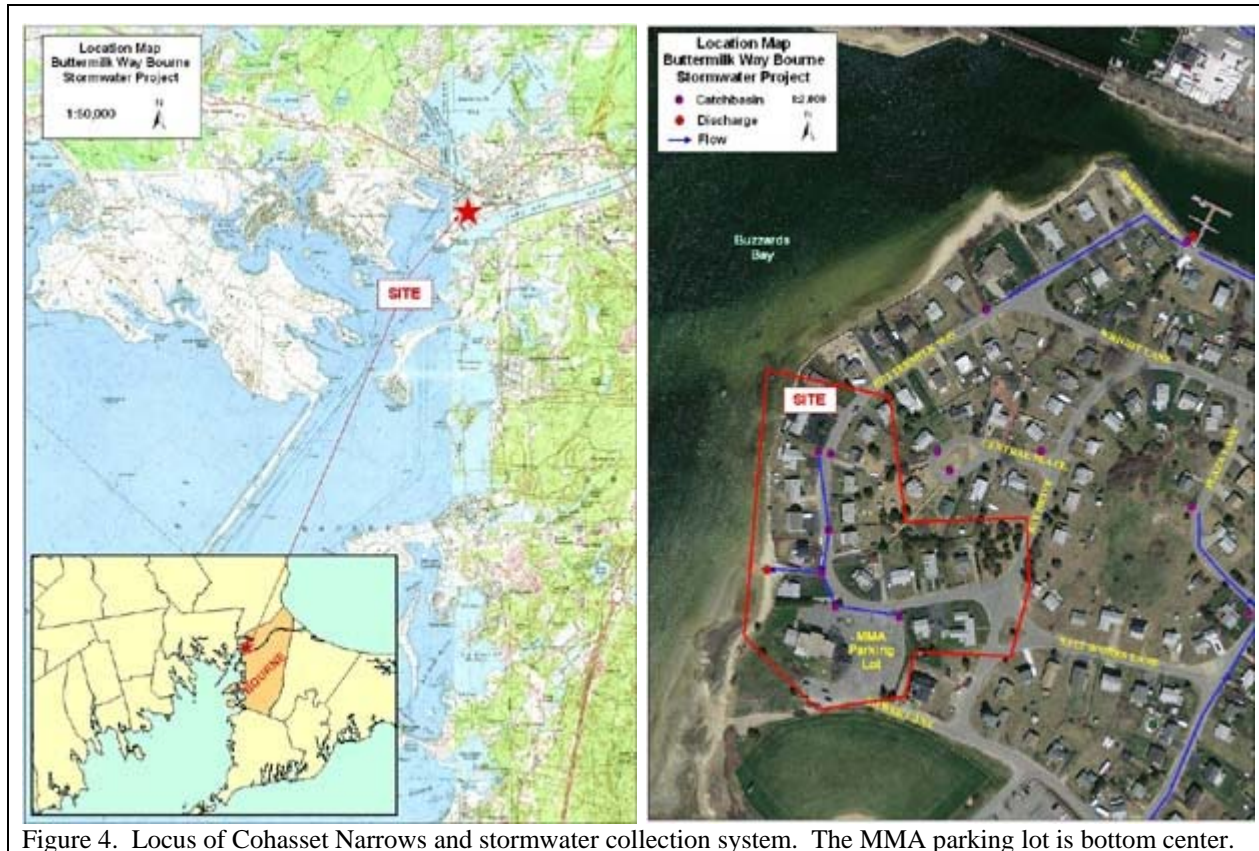


Figure 4. Locus of Cohasset Narrows and stormwater collection system. The MMA parking lot is bottom center.

a RFR April 13, 2012, and will select a vendor to begin work at the start of July, and designs are expected to be complete by September.

In 2011, the BBNEP drafted new stormwater regulations for the Marion Board of Health at their request, and they are currently under review by the town.

Task 4 - BBNEP Technical Assistance and Municipal Grant Program

The Buzzards Bay NEP's (BBNEP) primary mission is to provide technical support and, where possible, financial support to Buzzards Bay municipalities, and others, to help implement the recommendations in the Buzzards Bay Comprehensive Conservation and Management Plan. Much of the day to day work of Buzzards Bay staff revolves around specific projects, like helping a town develop stormwater treatment designs to treat a stormwater discharge contributing to shellfish bed closures, secure federal funding for environmental projects like herring ladder repair, or evaluate environmental impacts or determine compliance with local regulations of proposed development. Much of the staff workload is associated with overseeing and assisting towns to undertake projects funded through the municipal grant program.

During the latter half of 2011, the Wetland Specialist updated outdated GIS parcel maps for the Towns of Marion and Mattapoisett. These maps were needed for reports and analyses conducted by the towns. In addition, the Wetland Specialist had the town scan sewer and stormwater as-builts and plans so that they can be georeferenced to aerial orthophotography. Using this infor-

mation, the Buzzards Bay NEP created a GIS coverage of these sewer and stormwater lines which are now being used for stormwater planning in the town.

During 2011, the Buzzards Bay NEP closed out 7 grants totaling \$237,512 (Mattapoisett, \$45,000; Marion, \$45,000; Bourne, \$45,000; Rochester, \$45,000; Dartmouth, \$6,500; Fairhaven, \$30,506, and Rochester \$20,506). One grant to the Town of Wareham for \$45,000 was returned unspent and was added to the next grant round. Examples of projects funded by these grants are the replacement of a culvert to a fishway, creation of an interactive online GIS data viewer that allows viewing and printing of and a variety of overlays, and protection of 176 acres of open space.

In the fall of 2011, the Buzzards Bay NEP announced that \$180,958 in grants was being awarded to eight Buzzards Bay watershed municipalities. Funded by the U.S. Environmental Protection Agency (EPA) and administered by our program, these grants will aid towns in testing and treating stormwater discharges, protecting wetlands and wildlife habitat, improving water supplies and safeguarding open spaces.

The eight awards announced on September 29, 2011 are:

- **Acushnet** -- \$18,653 to protect 46.6 acres of undeveloped land along the Acushnet River through outright acquisition and a conservation restriction. Protection of the property will preserve 1,900 feet of frontage on the east bank of the Acushnet River and important associated wetlands and open field habitats, as well as provide public access for passive recreational activities, such as hiking and bird watching.
- **Bourne** -- \$20,000 to develop engineering designs to treat stormwater discharging bacteria and other pollutants to Cohasset Narrows at the mouth of Buttermilk Bay. Altogether, storm water will be treated from seven culverts along Buttermilk Way. This area has closed shellfish beds due to runoff pollution.
- **Fairhaven** -- \$35,000 to acquire a conservation restriction on a 32-acre agricultural property in East Fairhaven. Protection of the subject property will preserve the existing open space character of the area including its agricultural use, provide public access to walking trails that connect to adjacent protected lands, and protect the drinking water supply and wildlife habitat.
- **Marion** -- \$18,653 to hire an engineering firm to conduct an illicit discharge detection and elimination program that will monitor and test stormwater discharges to identify pollution sources including illicit discharges. The water sampling data will be used to develop baseline stormwater quality conditions to implement Best Management Practices (BMPs) to improve the water quality of the receiving waters.
- **Mattapoisett** -- \$35,000 to protect 16.61 acres of undeveloped land along the Mattapoisett River through outright acquisition of the property. Protection of the property, which lies within a Department of Environmental Protection (MassDEP) drinking water supply protection area, will preserve 1,880 feet of frontage on the Mattapoisett River, as well as wetlands and rare species habitat.
- **Rochester** -- \$15,000 to hire a consultant to upgrade the town's geographic information system (GIS) to account for new development and meet new state data standards. The town will also digitize wetland boundaries defined on plans previously submitted to the

Conservation Commission. The goal of the project is to provide the town with new, more accurate GIS data for municipal planning.

- **Wareham** -- \$18,653 to protect 32.5 acres of undeveloped land along the Weweantic River using outright acquisition and a conservation restriction. Protection of the property will preserve important watershed land along the Weweantic River and protect wildlife habitat.
- **Westport** -- \$20,000 to develop engineering designs to treat three municipal stormwater discharges from River Road into the West Branch of the Westport River. These discharges contribute pollution to the Westport River, which is degraded due to elevated levels of fecal coliform bacteria, which triggers shellfish bed closures.

The Buzzards Bay National Estuary Program continues to provide technical assistance to non-profits and municipalities in preparing permits for restoration projects, stormwater designs, and review of regulations, and nitrogen loading analyses.

The Buzzards Bay National Estuary Program produced over 391 new or revised maps and fulfilled dozens of requests for data, calculations, or graphics to be used for newsletters, grants, etc. Numerous maps and GIS evaluations were prepared for the Buzzards Bay Coalition, area land trusts, and municipalities. Examples include municipal open space maps, Buzzards Bay Coalition fundraising maps, maps used by municipalities in open space reports and their grant applications, maps used in the citizen monitoring program, and for other purposes.

The Buzzards Bay NEP's grant and technical assistance programs continue to fund or advance progress on EPA's Clean Water Act core programs. For example, the BBNEP continues to fund and provide technical support to the citizen water quality monitoring program, which is being used as the basis for updates to the state's water quality assessment and integrated list of waters standards, and nitrogen total maximum daily loads being developed for Buzzards Bay embayment watersheds by the Massachusetts DEP. Our work with towns to require nitrogen removal septic systems for new development, or to treat and remediate stormwater discharges to open shellfish beds and prevent beach closures (through technical assistance and grants) directly supports EPA goals to better control non-point source pollution on a watershed basis. Our ongoing and expanding watershed stormwater atlas and data set initiative not only helps towns map and evaluate their stormwater, but it is helping municipalities better comply with the NPDES Phase II MS4 stormwater program, and even placing towns on the fast track to take action as compared to other communities around the Commonwealth. This work, together with our efforts with towns to evaluate sewer and nitrogen removal onsite technology that could be used to meet soon to be enacted nitrogen TMDLs, is helping municipalities better understand the need for sustainable wastewater infrastructure. Finally, our efforts to help towns and applicants better comply with local, state, and federal wetland laws and our efforts to help towns restore impaired wetlands continue to meet broad Clean Water Act goals and new MS4 requirements expected in the coming year.

Task 5 - Program Oversight and Administration

The Buzzards Bay National Estuary Program Executive Director and Administrative Assistant and MCZM financial manager ensure administration of the EPA and other grants and ISAs

awarded to the Buzzards Bay NEP. The Buzzards Bay NEP Administrative Assistant and Director continue to enhance the processing of state and federal grant expenditure reports to improve grant and budget tracking. The BBNEP Steering Committee met to review program activities in May 2011, and June 2011. Final Government Performance Results Act (GPRA) data was submitted on time in September and FY 11 reported leveraged funds and habitat protected or restored are shown in Figures 1 and 2.

Task 6 - Buzzards Bay Citizen’s Water Quality Monitoring

In the fall of 2011, the Coalition submitted a data report and disk for the 2011 year. More than 135 volunteers participated in the Baywatchers Water Quality Monitoring Program’s 20th water quality sampling season between May and September. In March 2012 the Coalition summarized data from the monitoring program in its triennial (2011) state of the Bay report.

On April 26, 2012, the Baywatchers program received EPA's Annual Environmental Merit Award for its 20 years of success as a program. EPA wrote in its press release:

"The Baywatchers Program, the largest coastal monitoring effort in Massachusetts, covers more than a quarter of the state’s coastline and has been administered by the Buzzards Bay Coalition since 1992. The Coalition involves citizens evaluating water quality and ecological trends. Baywatchers’ citizen volunteers have tested water quality every five days in the summer for 20 years. More than 700 citizen volunteers have been trained to monitor dissolved oxygen, temperature, salinity, and water clarity, and have done so at more than 200 locations. Baywatchers provides data that 18 communities around the bay rely on when making decisions about local estuary restoration. The Buzzards Bay Coalition publishes reports on the data collected, data used to develop environmental policy, regulations, and permitting criteria. This data motivated the town of Wareham to upgrade its wastewater treatment plant. Measured improvements in water quality below the plant showed the value of the investment. The Baywatchers Program, directed by Tony Williams, has shown unrelenting diligence in monitoring and seeking to ease threats to the Buzzards Bay ecosystem. They have analyzed bay water quality over 20 years, educating and training hundreds of citizen volunteers, and have published the findings to develop widespread community support."

Task 7 - Environmental Indicators and Outcomes Tracking

The Buzzards Bay Coalition issued its 2011 (triennial) State of the Bay report in March 2012. The Buzzards NEP gave technical support analyzing data and preparing maps for the report. In particular, the Buzzards Bay NEP was

	2003	2007	2011	
POLLUTION				
Nitrogen	59	56	53	↓
Bacteria	59	57	62	↑
Toxics	45	47	52	↑
WATERSHED HEALTH				
Forests	76	75	79	↔
Streams	68	67	71	↔
Wetlands	60	60	60	↓
LIVING RESOURCES				
Eelgrass	34	25	23	↓
Bay Scallops	12	10	3	↓
River Herring	5	1	1	↓
OVERALL SCORE	48	45	45	

Figure 5. Summary score of last three Buzzards Bay Coalition State of the Bay reports.

the lead in developing the measures for eelgrass abundance trends and bacteria pollution. A summary of the scores for the last three State of the Bay reports is shown in Figure 5.

The measure of bacteria pollution is tracked by shellfish bed closures by the state. During the fall of 2011, the BBNEP worked with the Division of Marine Fisheries to update shellfish bed closure GIS coverages to cover the July 1, 2011 status maps (Figures 6 and 7).

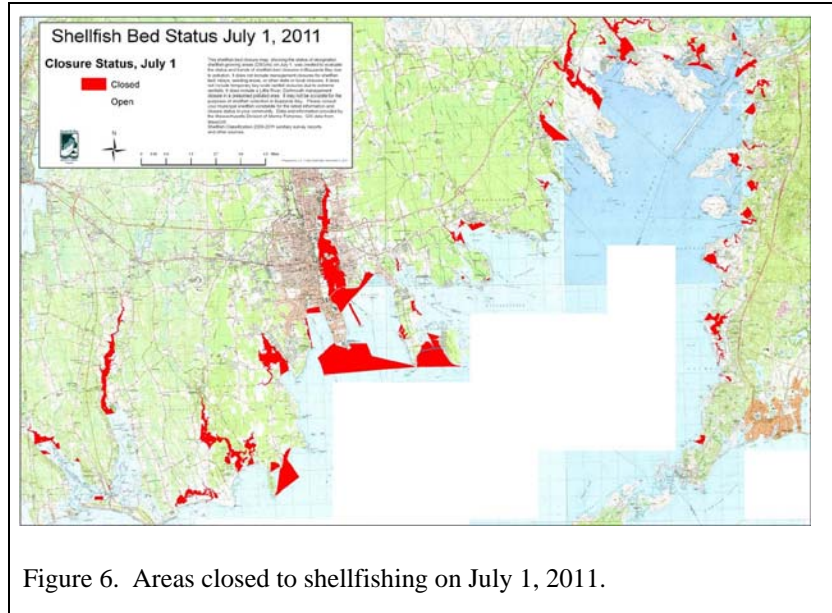


Figure 6. Areas closed to shellfishing on July 1, 2011.

For the eelgrass bed analysis, because there was an insufficient number of embayments mapped by DEP for a new score for the 2011 State of the Bay report, the BBNEP undertook a review of other publically available recent aerial imagery, to expand the geographic extent of eelgrass maps on which to estimate a new eelgrass score, as described in more detail below.

At the same time, the BBNEP also analyzed for the first time, additional archival photographs from the 1950s, 1960s, and 1970s, and newer aerial photography from 2005-2010 to develop a more comprehensive trend of changing abundance of eelgrass in embayments around Buzzards

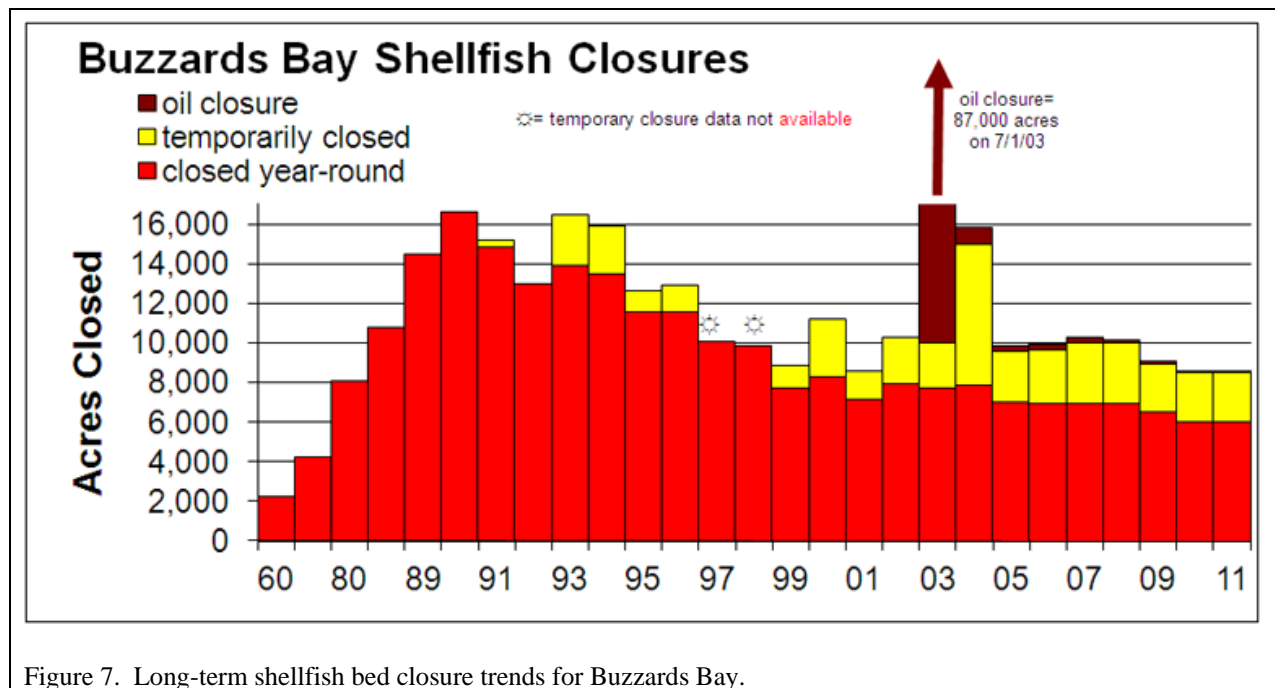


Figure 7. Long-term shellfish bed closure trends for Buzzards Bay.

Bay. This allowed us to define with more precision the historical recovery of eelgrass in Buzzards Bay after the wasting disease, detail trends for specific embayments and outer coast areas, and identifies new declines evident during the past 20 years. This new analysis helped us refine average abundance of eelgrass for each decade between the 1950s and today (see Figure 8). All these new maps and aerial surveys will be contained in a new report of historical changes in eelgrass in Buzzards Bay to be released later in 2012, with additional maps showing assumed eelgrass boundaries on the original source photographs to facilitate comment and review of our approaches.

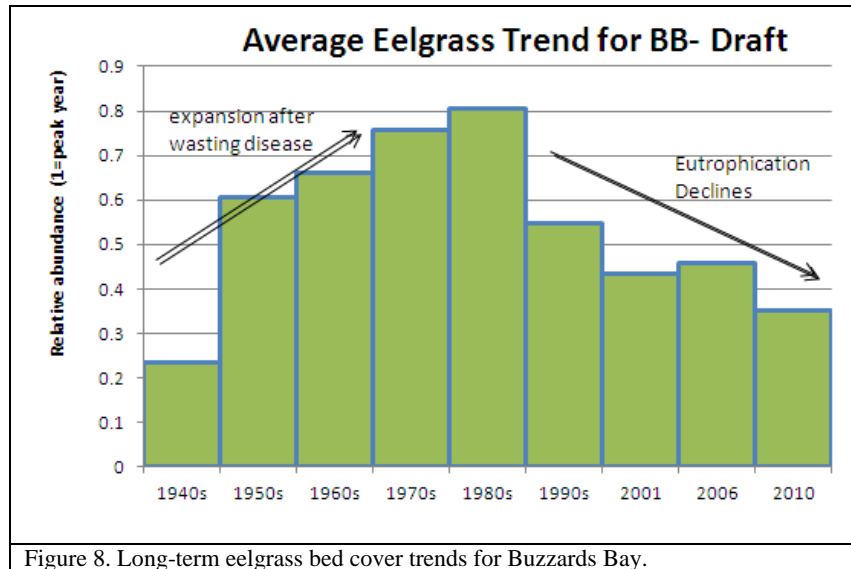


Figure 8. Long-term eelgrass bed cover trends for Buzzards Bay.

Task 8 - Outreach and Education

The Buzzards Bay Coalition undertook outreach and education activities highlighting the condition and state of Buzzards Bay, progress toward restoration and protection goals, and collaboration with the Buzzards Bay National Estuary Program in their activities. These activities included the July 2011 Swim Buzzards Bay, their annual meeting, press events, and various publications, including the annual report to their members.

The Coalition also produces brochures, fact sheets, press releases, and other events about citizen action to protect and restore Buzzards Bay. Some information on these events is at <http://www.savebuzzardsbay.org/Support>.

On July 2, 2011 the Coalition held their 18th consecutive Swim Buzzards Bay. This 1.2 mile swim from New Bedford to Fairhaven is open to swimmers from ages 12 to 73, every age, ability, shape, size, and fitness level. One hundred and forty-nine swimmers, more than half of which were newcomers, participated in the event demonstrating their care and concern for clean bay waters and a healthy environment.

The Buzzards Bay Coalition held the 5th Annual Watershed Ride on Sunday, October 2, 2011. The 76-mile Ride, which drew 116 adventurous cyclists, begins at Horseneck Beach in Westport ending in Woods Hole. Perfectly timed to take advantage of the spectacular autumn foliage, the cools days of early fall, and the quiet off-season roads, the Ride is one of the best outdoor events of the season.

In 2011, the Coalition for Buzzards Bay continued to press the state, the Massachusetts Estuaries Project, and the US EPA to develop and finalize nitrogen TMDL in Buzzards Bay embayments.

During 2011, the Buzzards Bay NEP updated and streamlined the navigation of its website, and continued to update information related to stormwater pollution, nitrogen loading, and habitat protection efforts in the Buzzards Bay watershed.

Task 9 - CCMP Update and Watershed Action Plan Development

In 2011 and 2012, the Buzzards Bay NEP continued to finalize the updated CCMP. In January 2012, NEP Director gave a presentation on the updated management plan to the Falmouth Association Concerned with Estuaries and Saltponds (FACES) and released the document's Executive Summary. The draft final document is now available online on the Buzzards Bay NEP website (at <http://www.buzzardsbay.org/newccmp.htm>). The document continues to undergo review. In 2012, the Buzzards Bay NEP Steering Committee will decide the approval strategy for the updated document.

Task 10 - Other Specialized Technical Assistance

In 2010 and 2011, at the request of the Mass Department of Environmental Protection, the BBNEP Executive Director provided technical assistance to the Massachusetts Estuary Project to conduct certain GIS analyses for watersheds in Buzzards Bay. Specifically, the BBNEP agreed to re-evaluate parcel data, assessor's data, and water department data to accurately estimate the number of commercial and residential units in subwatersheds, and to identify properties served by septic systems or sewer for TMDL reports for New Bedford Harbor and Wareham River estuaries. In 2011 and 2012, Mass DEP asked the Buzzards Bay NEP director to participate in the review of other TMDL reports both inside and outside of the watershed. The effort involved appreciable time from both the Director and Administrative Assistant.

In 2010-2011, the BBNEP completed its work with state and federal agencies reviewing and evaluating the environmental impacts of the 2003 Bouchard No. 120 oil spill in Buzzards Bay as part of the state-federal Natural Resources Damage Assessment, and assisted the state with the collection of documents associated with the Aquatic Resources Technical Workgroup for posting on the NRDA website.

At the request of the Town of Marion DPW, the Buzzards Bay NEP prepared a sewer map for the town. The map will be used by the Town of Marion to evaluate future sewer needs, determine needs for a new municipal Comprehensive Water Management Plan, and for the town to provide data to the Massachusetts Estuaries Project.

BBNEP also updated and corrected the Town of Mattapoisett's parcel data. Such data is essential for land use planning, adopting environmental zoning regulations, identifying public lands to ensure their protection, and to help identify future acquisition and protection of sensitive wetlands and plant and animal wildlife.

The Buzzards Bay NEP continues to provide technical guidance on nitrogen management issues to the Buzzards Bay Coalition and Town of Wareham. The Buzzards Bay Coalition hosted and facilitated meetings with the Town that resulted in draft Board of Health regulations to require nitrogen removal septic systems for new construction. These regulations have continued to be

discussed and debated in the Board of Health meetings in 2011 and 2012. In a separate initiative meant to support the Board of Health regulations the Wareham Clean Water Committee filed a bylaw for vote in the spring 2012, also mandating nitrogen removal septic systems for new construction. The failure of both these initiatives illustrate the challenges that must be met to comply with watershed nitrogen TMDLs.

The BBNEP continues to distribute LIDAR data through its website to the municipalities and engineering firms.

Task 11 - Technology Transfer to Other Estuaries

Travel to National Meetings during past Fiscal Year.

EPA requires travel of NEP staff to attend EPA and non-EPA national meetings for the purposes of tech transfer and staff development. The BBNEP allocated \$4,700 for all travel in our work plan. It is important to recognize that this category includes both in-state travel of staff to meetings and site visits, and out-of-state-travel costs. Due to state budget restraints and policies, BBNEP out-of-state travel was curtailed, however the BBNEP director did attend the February 2012 ANEP meeting in Washington, DC (see Figure 9). At this meeting the Buzzards Bay NEP Director was on a panel discussing implementation at the local level and how NEPs are leveraging and advancing national CWA programs.



Figure 9. Buzzards Bay NEP Director Joe Costa with EPA officials Nancy Stoner and Randy Hill, discussing NEP implementation at the local level and how the NEPs are leveraging and advancing national CWA programs at the March 2012 NEP meeting in Washington, DC.

A summary of out of state and in state travel to date is provided in Table 2 below.

Table 2. Summary of BBNEP travel for the last grant period.			
Executive Director			
	Washington DC NEP Meeting	Feb-12	\$1006.43
	National Meeting sub-Total		\$1006.43
Staff In-state Travel	reimbursements (estimate to June 30)		\$900.00
	Total Travel		\$1912.86

Task 12 - Website Maintenance and Innovation

The Buzzards Bay National Estuary Program continued to maintain an independent website to assist the BBNEP to promote new approaches, receive feedback, communicate successes, track trends in water quality, performance of government in implementing the CCMP, express the views and concerns of the NEP Steering Committee, create a forum for new initiatives and ideas of our partners, and support other obligations and tasks identified in this work plan. The website is also used to post results of the bay indicators and documents relating to the oil spill, and post procurement notices and grant announcements. The BBNEP has also been systematically scanning all old BBNEP reports and gray literature related to Buzzards Bay and posting it on our website.

Currently there are a total of 590 main pages, with an additional 750 downloadable pdf files and reports, as well as numerous graphic files and maps, for a total space use of 4.5 GB on the BBNEP website. The website currently receives more than 1300 unique visitors per day, and it remains a major resource for information about Buzzards Bay.

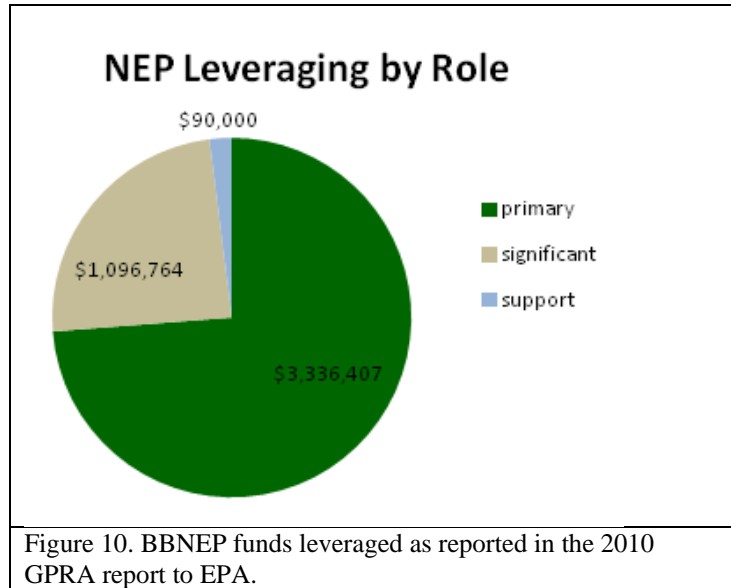
Task 13 - Climate Change Vulnerability

The Buzzards Bay National Estuary Program proposed to use LIDAR data to extrapolate the 100-year flood plain by 1, 2 and 4 foot increases in elevation to illustrate the expansion of the flood zone. Originally this work was to be accomplished for just one community through a solicitation, but because Massachusetts CZM had a similar pilot project in its workplan, and because this project can be easily extrapolated to other communities, the Buzzards Bay NEP and MCZM agreed to work together to conduct this effort for all communities in the Buzzards Bay watershed.

In the spring of 2012, the Buzzards Bay NEP received all the necessary LIDAR data to complete this task, and began assembling GIS data from the towns, and developed protocols to complete the work. This task will require approval of a QAPP for the use and analysis of secondary data, and the BBNEP has drafted a QAPP based on techniques developed in the preliminary analysis. The work on this expanded task is expected to be completed by the end of summer 2012.

2011 Leveraged Funding (Federal FY10 Workplan funds)

Each September, the Buzzards Bay National Estuary Program submits to EPA, as part of our Government Performance Reporting Act requirements, a summary of state, federal and local dollars and in-kind services leveraged by the Buzzards Bay NEP, or leveraged by our partners with technical support by the Buzzards Bay NEP, in support of the implementation of the Buzzards Bay CCMP. Some funds are leveraged through the municipal grant program; other funds are leveraged through other grant programs with our partners. For the period October 1, 2010 to September 30, 2011, the Buzzards Bay NEP's leveraged funds in the primary or significant category totaled \$3,336,407 and \$1,096,754 million respectively and the support category totaled \$90,000



NEP Role (primary, significant, or support)	Total
Primary	\$3,336,407
Significant	\$1,096,764
Support	\$90,000
Grand Total	\$4,523,171

We will report our FY11 2011-2012 leveraged estimates to EPA in the fall 2012.

Section 3: FY2012 Funds Work Plan Narrative Summary

Federal FY 2012 Tasks (July 1, 2012 to June 30, 2013)

We have organized the work plan narrative summary using our past work plan structures for the most part and EPA's recommended logic model to the greatest extent possible. In this effort, we have conformed to EPA's terminology defined as follows:

- Activities: NEP work plan projects;
- Partnerships: involvement of local community partner agencies, organizations and/or individuals;
- Outputs: products and services resulting from the work plan (i.e., deliverables);
- Short-term outcomes: changes in knowledge, learning, attitude, and skills; raising awareness amongst targeted NEP partners and stakeholder groups;
- Intermediate outcomes: changes in behavior, practice, decisions and involvement among targeted NEP partners and stakeholder groups;
- Pressures: changes, positive and/or negative, related to specific quantitative targets (e.g., percent of nitrogen reduction); and
- Long-term outcomes: changes in condition of the state, when possible.

Task 1 - Wetland Restoration and Open Space Protection and Restoration

CCMP/Work Plan Goal(s):

Wetlands and habitat protection and restoration in the wetland action plans and the land use management action plans principally. (Sub-element: Habitat, Water Quality, Living Resources, Healthy Communities. Program goal: Ecosystem Restoration & Protection)

Project/Activity Purpose and Description: (ongoing)

As we have done in the past, the Buzzards Bay NEP will continue to work and collaborate with the Buzzards Bay Coalition, as well as with area land trusts, in our ongoing effort to protect and restore valuable wetlands, and upland wildlife habitat throughout the Buzzards Bay watershed. Through this effort, the Buzzards Bay NEP will continue to provide maps, help develop state and federal grant applications, conduct land use analyses, and through the municipal grant program, provide funds for land protection purposes. Work related to this task will be principally generated through the municipal grant program and in response to requests by area lands trusts, municipalities, and the Buzzards Bay Coalition.

Responsible Partners and Their Role(s):

The Buzzards Bay Coalition and area land trusts are key partners in our combined efforts. These non-profits are vitally important in the development of grant applications, and in building local financial and political support for new initiatives. These non-profits also work with private landowners to become partners in these protection efforts.

NEP Staff:

Principal Staff involved in these tasks: Regional Planner will provide technical support to the Buzzards Bay Coalition and area land trusts. Additional support will be provided from other Buzzards Bay National Estuary Program staff, with guidance from the Executive Director, as well as with input from the Coalition Executive Director and area land trusts. The Executive Director, Regional Planner, and Administrative Assistant complete the GPRA report.

Outputs/Products:

1. Grant applications to state and federal grant programs.
2. Additional applications will be submitted to the BBNEP municipal grant program in support of these efforts.
3. The BBNEP may provide support to towns to complete outdated local open space plans (which expire every seven years).
4. The permanent protection of new open space with wetlands and other important habitat in the Buzzards Bay watershed through conservation restriction or purchase in fee.
5. Annual GPRA reports on wetland and habitat protected or restored will be submitted through the NEPORT website.

Milestones:

1. Report to EPA each September via GPRA report on the NEPORT website. Other projects and activities as financial or local interest opportunities arise. Projects undertaken through BBNEP municipal grant program must comply with schedules established by the grant awards. State land conservation grant eligibility (and other grant programs) varies with communities. Maps prepared for area Land Trusts as need and upon request.

Budget:

Staff costs and those funds in the municipal grant program that are competitively awarded under this category. Roughly \$2,000 in office supplies and paper, and printer ink are projected to be expended on the production of maps, brochures, and outreach information.

Outcomes:

Short-term: Increased number of habitat acres protected and restored, including geographic information systems location data.

Intermediate: Increased number of wetland and habitat related actions in the Buzzards Bay Comprehensive Conservation and Management Plan that have been completed. Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions. Increased number of acres of protected open land through purchase or easement.

Long-term: CCMP Goal: Long-term increase of high-quality wetlands and coastal habitat in the Buzzards Bay watershed.

Supports CWA core program: CWA and state wetland protection efforts.

Task 2 - Buzzards Bay stormwater mapping, atlas and database update

CCMP/Work Plan Goal(s):

Principally Stormwater Management, Shellfish Bed Restoration, Nitrogen Management, and Toxics Reduction.

Project/Activity Purpose and Description: (ongoing):

The BBNEP will continue its work to assist municipalities to map stormwater drainage networks for meeting the anticipated new Phase II MS4 permit, upon request.

Responsible Partners and Their Role(s):

Buzzards Bay municipalities.

NEP Staff:

Principal Staff involved in these tasks: Regional Planner, Stormwater Specialist and Executive Director.

Outputs/Products:

1. Updated GIS databases, made available on the program's website.
2. Maps and GIS shapefiles to be on the program's website.
3. Maps prepared for municipalities and others upon request.

Milestones:

1. New maps and shapefiles posted online as needed.
2. Other tasks completed upon request or as needed.

Budget:

Staff costs and those funds in the municipal grant program that are competitively awarded under this category. Roughly \$500 in office supplies and paper is expected to be spent on the production of maps for this task. Joint projects with towns under our municipal grant program require a minimum match of 33% of total project costs, however, actual match has averaged 3-4 times the grant awards, and is this basis of the current match estimate.

Outcomes:

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: Increased number of shellfish resource areas protected and restored. Decreased acres of shellfish beds that are closed and increased acres of temporarily closed shellfish beds over time (reduced closures indicates a positive environmental outcome). Increased number of actions in the Buzzards Bay Comprehensive Conservation and Management Plan that have been completed.

Long-term: CCMP goals: Stormwater 1) Prevent new or increased untreated stormwater flows to Buzzards Bay that would adversely affect shellfish harvesting areas, swimming beaches, water quality, and wetlands. Stormwater 2) Correct existing stormwater runoff problems that are causing or contributing to water quality degradation or shellfish-bed closures in Buzzard Bay. Shellfish restoration: Increase availability of shellfish resources for recreational and commercial uses.

Pressures affecting outcomes: Other tasks relating to local map preparation and data analysis, QA, and other technical assistance demands and requests by watershed municipalities affects the programs abilities to meet these projects.

Supports CWA core program: 1) developing total maximum daily loads (for bacteria), 2) controlling non-point source pollution on a watershed basis, 3) strengthening National Pollutant Discharge Elimination System permits, and 4) supporting sustainable wastewater infrastructure.

Task 3 - Stormwater Remediation and Technical Assistance

CCMP/Work Plan Goal(s): Ecosystem Restoration and Protection:

Principally Stormwater Management, Shellfish Management, and Wetlands and Habitat action plans, secondarily Land Use, On-Site Septic System management plans.

Project/Activity Purpose and Description: (ongoing)

There are several ways the Buzzards Bay National Estuary Program provides assistance to towns on stormwater issues. First, we review stormwater designs proposed by towns for remediation projects, or at the request of a town board as part of local permitting or site plan review. Second, we help towns prepare grant applications for federal monies to help fund remediation of priority sites. Third, we assist towns to develop and implement stormwater management plans, like the Phase II MS4 NPDES municipal plans. Finally, we work with town boards to adopt local stormwater regulations and LID strategies.

Responsible Partners and Their Role(s):

Our principal partners on these projects are the watershed municipalities. Other partners may arise in the course of project revisions, collaborations related to MEPA permit submissions, or projects commencing that are of regional significance.

NEP Staff:

Stormwater Specialist will conduct the stormwater design reviews, the Wetlands Specialist will assist in the implementation of stormwater regulations and the Stormwater Specialist and Executive Director will develop federal grant applications and attend meetings as needed or opportunities arise.

Outputs/Products:

1. Products include stormwater plan updates, review and analysis of stormwater calculations.
2. Proposals to fund stormwater designs developed by municipalities, minimize impacts of new development, towns adopt improved stormwater regulations and policies.
3. Assistance in the completion of past projects including facilitation of permitting, including past projects where the BBNEP prepared preliminary stormwater treatment designs, or where the BBNEP completed stormwater designs.

Milestones:

Most products and activities in this technical assistance program arise and are completed as needed on an ad hoc basis, and as permit applications are submitted, or as towns express interest and have match available to apply for federal and state grants. Some activities are defined by stormwater grants in the Buzzards Bay municipal grant program. Other specific milestones from projects already initiated.

Budget:

The only costs are BBNEP staff time, including the \$40,000 annual cost of stormwater services from the Natural Resource Conservation Service. Joint projects with towns under our municipal grant program require a minimum match.

Outcomes:

Short-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Intermediate: Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions.

Long-term: Actions taken to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: Interest and local match availability. The BBNEP can handle requests for technical assistance depending upon workload and ongoing projects.

Supports CWA core program: 1) improving water quality monitoring, 2) developing strategies to meet Buzzards Bay total maximum daily loads (for bacteria), 3) controlling non-point source pollution on a watershed basis, 4) strengthening National Pollutant Discharge Elimination System permits, and 5) supporting sustainable wastewater infrastructure.

Task 4 - BBNEP Technical Assistance and Municipal Grant Program

CCMP/Work Plan Goal(s):

Technical Assistance and Capacity Building

BBNEP technical assistance and municipal grant program

May address Stormwater, Nitrogen, Shellfish, Wetlands and Habitat, Land Use, On-Site Septic Systems, and other action plans.

Project/Activity Purpose and Description: (ongoing)

The BBNEP will continue to promote restoration and protection projects through the management and facilitation of grants awarded through the municipal minigrant program, and to promote the use of these limited funds to leverage other funding. Administration of the project will be by the Executive Director, Regional Planner, Administrative Assistant, and a technical lead by the staff member most closely specializing in the area of the grant. Thus, all staff members will be involved to some degree in the minigrant program. The funds will be directed to tasks necessary to implement priority action plans in the Buzzards Bay CCMP, and will be identified after consultation with the Buzzards Bay Action Committee and other partners. BBNEP staff guide projects and often complete tasks and assist with permitting to facilitate completion of projects.

In an effort to ensure that federal funds are expended in a timely way to meet new federal policies, funds in the new cooperative agreement will be announced in an RFR that will close in the spring, with all projects completed by June 30 of the following year. In 2011, the RFR will be issued in May 2011 for an anticipated contract award date of August 2011.

Responsible Partners and Their Role(s):

Buzzards Bay municipalities are of course the key partners in this effort, and are the only entities eligible to receive direct funding. However, for stormwater design grants, the BBNEP directly contracts with engineering firms to expedite this task and to ensure better consistency with state

stormwater policies. The Buzzards Bay Action Committee (BBAC) is a key partner in ensuring continued interest and participation in the program. Moreover the BBAC helps the BBNEP target grant funding areas in the program. The Buzzards Bay Coalition sometimes partners with Buzzards Bay municipalities in developing state and federal grant applications.

NEP Staff:

Principal Staff involved in these tasks: Executive Director, Stormwater Specialist, Regional Planner, and Administrative Assistant, CZM and other staff as needed.

Outputs/Products:

Scopes developed, contracts awarded, press releases prepared, website updated with projects, projects overseen, projects completed, match documents received, and contracts closed.

Milestones:

1. RFR issued April 27, 2012 for next RFR round.
2. Grant applications received June 28th, 2012.
3. Grants awarded September 15, 2012.
4. Contracts closed June 30, 2013 with possible extension to December.

Budget:

Besides the cost of staff to oversee and assist in the completion of projects, a minimum of \$71,550 in federal FY12 Section 320 funds are dedicated to this effort (stormwater design plus regular grant awards). In addition, on May 7, 2012, the BBNEP Steering Committee directed an additional \$55,000(\$35,000 municipal minigrant funds and \$20,000 in stormwater designs will not be used by awardees) in unspent funds from the previous \$598,800 award toward the municipal grant program. There was also a reduction in the fringe rate which resulted in a \$13,491 savings. Thus, the total in the next municipal grant round is estimated to be \$140,041.

Outcomes:

Short-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Intermediate: Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions.

Long-term: Actions taken to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: There are two principal issues that can delay this effort. First, the state may delay the award or release of funds for various reasons. Second, municipalities may have problems meeting grant schedules for various reasons and request extensions in their grant agreements.

This task may support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge

Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

Task 5 - Program Oversight and Administration

CCMP/Work Plan Goal(s):

Supports all program activities.

Project/Activity Purpose and Description: (ongoing)

The Buzzards Bay National Estuary Program Executive Director and Administrative Assistant and MCZM financial manager ensure administration of the EPA and other grants and ISAs awarded to the Buzzards Bay NEP.

The Buzzards Bay National Estuary Program will submit complete Government Performance Results Act (GPRA) report information to EPA as specified in the EPA Funding Guidance. The GPRA report for NEPs includes annual estimates of habitat and wetlands protected or restored, and annual estimates of funds leveraged in some way by the NEP. As a requirement of this agreement, the BBNEP will provide information on the GPRA performance measures to EPA by their required date.

Responsible Partners and Their Role(s):

The BBNEP parent agencies of MCZM and EEA are responsible for the fiduciary and financial reporting requirements of the BBNEP.

NEP Staff:

Principal Staff involved in these tasks: BBNEP Executive Director and Administrative Assistant, with additional support from the MCZM financial management assistant.

Outputs/Products:

1. Financial reports to EPA.
2. Preparation of work plans, cooperative agreements, grant amendments.
3. Steering Committee meetings needed to review the work plan.
4. Performance reports to EPA.

Milestones:

1. Account draw downs and reports as needed and required.
2. GPRA and leveraging reports due to EPA annually in September.
3. Draft 2012 work plan sent to Steering Committee in May 2012.
4. Approved Cooperative Agreement sent to EPA in May 2012.
5. EPA finalize award by 30 July 2012.

Budget:

The only costs are BBNEP staff time.

Outcomes:

Short-term: Increased leveraging of resources committed to Buzzards Bay NEP activities or towards implementation of CCMP goals and recommended actions.

Intermediate: Increase and improve upon the information that the Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public has for making management actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: Various administrative delays are possible at levels in the hierarchy.

This task does not directly support any CWA core programs.

Task 6 - Buzzards Bay Citizen's Water Quality Monitoring

CCMP/Work Plan Goal(s):

Principally Nitrogen Management, but also some assistance toward goals in Stormwater, Shellfish, Wetlands and Habitat, Land Use, On-Site Septic Systems, Sewage Treatment Facilities action plans.

Project/Activity Purpose and Description: (ongoing)

With its support from the BBNEP, Commonwealth of Massachusetts, citizens, dues, and other sources, the Buzzards Bay Coalition will continue its nationally recognized water-quality monitoring program, which costs roughly \$200,000 annually. The Buzzards Bay National Estuary Program provides technical support and funding to the program (\$25,000 this year). The Buzzards Bay National Estuary Program and the Coalition use data collected by the Coalition program to advocate for nitrogen management in Buzzards Bay watershed communities, the data is used by DEP's Massachusetts Estuaries Project in the development of TMDLs. The Commonwealth of Massachusetts for a number of years provided between \$100,000 and \$150,000 annually toward this program that was used as match to our program, but this has been discontinued.

Responsible Partners and Their Role(s):

The Buzzards Bay Coalition is the lead for the program, and is responsible for meeting state and federal QAPP requirements. The BBNEP Regional Planner provides GIS products in support of the program. The BBNEP Executive Director coordinates with Coalition Executive Director on needed program support, and provides technical assistance and guidance on biannual water quality and related state of the bay products.

NEP Staff:

Principal Staff involved will be the BBNEP Executive Director, Administrative Assistant, Regional Planner, and other NEP staff as required.

Outputs/Products:

1. Annual data disks provided to the BBNEP.
2. Updates posted to Coalition and BBNEP website.
3. Electronic rainfall database maintained for evaluating impacts to water quality.

Milestones:

1. Coalition submits data for summer 2011 monitoring by May 2012.

Budget:

The only costs of Section 320 funds under this Cooperative Agreement with EPA is the separate \$25,000 award provided by the BBNEP, and some BBNEP staff time, and some supplies for map products. The Coalition's budget for the monitoring program is \$200,000.

Outcomes:

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed. Increase involvement of citizens to protect the natural resources of Buzzards Bay by actively empowering people to get involved and make a difference in the sound management and restoration of the Bay's resources.

Intermediate: Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay. The advancement in knowledge on the effects of nitrogen pollution and documentation of the condition of localized water quality throughout Buzzards Bay harbors in relation to nutrient loads from the watersheds. Provide external water quality data for the Massachusetts Department of Environmental Protection to assess water body health and develop cleanup plans for impaired waters.

Long-term: Maintain, and ideally increase, the number of acres of eelgrass habitat in Buzzards Bay through reduced nitrogen loading. Meet nitrogen action plan goals: 1. Ensure that no beneficial water uses will be lost, nor will ecosystems adversely affected by excessive contributions of nitrogen to any embayment within Buzzards Bay. 2. Restore any beneficial water uses and ecosystems lost or impacted by the excessive contribution of nitrogen to any embayment within Buzzards Bay.

Pressures affecting outcomes: Turnaround time in receiving data and data analysis from the Coalition's analytical laboratory.

This task supports these core programs: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, and CWA and state wetland protection efforts.

Task 7 - Environmental Indicators and Outcomes Tracking

CCMP/Work Plan Goal(s):

All Action Plans.

Project/Activity Purpose and Description: (ongoing)

The US EPA requires an assessment of environmental “outputs” and “outcomes”, and a method to measure achievement of outputs and outcomes in our efforts to implement the CCMP, and to meet our overarching goal to protect and restore water quality, wetlands, and habitat in Buzzards Bay and its surrounding watershed. The Buzzards Bay National Estuary Program defines environmental outcomes and preliminary indicators through its annual Government Performance Reporting Act submissions.

The Buzzards Bay National Estuary Program submitted its first report to EPA in October 2003, and continues to submit this information annually. To a large degree, the Buzzards Bay National Estuary Program will measure this work plan's outputs and outcomes based on annual reporting of work plan tasks completed, CCMP recommendations implemented, remediation projects completed, and our GPRA/environmental indicators reporting. Each work plan will contain a summary of tasks and measurable outcomes accomplished over the previous year, and tasks ongoing through program extensions.

To meet the need for environmental indicators reporting, the Buzzards Bay National Estuary Program has set up a Buzzards Bay “status and trends” webpage at www.buzzardsbay.org/trends.htm. This page summarizes information tracked by the Buzzards Bay National Estuary Program and the Buzzards Bay Coalition that is needed to evaluate the long-term progress on key environmental indicators for Buzzards Bay, and builds upon work developed for the Coalition’s 2003 State of the Bay conference, and also the 2007 and 2011 State of the Bay reports.

Specifically the Buzzards Bay National Estuary Program continues to track and monitor key environmental indicators to document the success of the CCMP. Besides the ongoing water quality monitoring program of the Coalition, DEP eelgrass data, together with new historical eelgrass information collated by the Buzzards Bay NEP, will help create a new eelgrass area tracking system posted on our website for Buzzards Bay embayments. This information was posted on our website in for some sites beginning in March 2012, and will be completed by January 2013. Other data tracked by the Buzzards Bay National Estuary Program will be the percentage of stormwater discharges with some form of stormwater remediation implemented, tracking of CCMP accomplishments, ongoing monitoring of two key Buzzards Bay herring runs, and the ongoing tracking of protected open space and new land acquisitions.

To more readily transmit information collected through the citizen water quality monitoring program (see Task 12), the Buzzards Bay Coalition plans to continue to enhance its website to include annual updates of its water quality testing program to show individual trends for Buzzards Bay embayments. The BBNEP believes this is an important endeavor to enable citizens and managers to see trends in embayments they are most concerned with.

Responsible Partners and Their Role(s): (ongoing)

The Buzzards Bay Coalition is a key partner in this effort and is the lead in the collection and tracking of several data sets. The Massachusetts Division of Marine Fisheries is the lead agency in collecting and assessing shellfish closures, and provides this data to the Buzzards Bay NEP. The BBNEP coordinates closely with DMF in creating Buzzards Bay GIS shellfish bed closures.

NEP Staff:

Executive Director and Administrative Assistant.

Outputs/Products:

1. Annually updated shellfish bed closure maps for Buzzards Bay posted at the program's annual summary shellfish closure web page.

Milestones:

1. Shellfish bed closure map for the summer of 2012: Initiated August 2012, completed September 2012.

Budget:

The only section 320 funds are BBNEP staff time, with some supplies for map products. The Coalition's budget includes staff and outreach and publication costs.

Outcomes:

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay. The advancement in knowledge on the effects of nitrogen pollution and documentation of the condition of localized water quality throughout Buzzards Bay harbors in relation to nutrient loads from the watersheds.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: Unanticipated demands on staff time.

This task may indirectly support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

Task 8 - Outreach and Education

CCMP/Work Plan Goal(s):

CCMP Actions: Will address Stormwater, Nitrogen, Shellfish, Wetlands and Habitat, Land Use, On-Site Septic Systems, Sewage Treatment Facilities.

Project/Activity Purpose and Description (ongoing):

The Buzzards Bay NEP's outreach and education efforts principally focus on the general public

through the program's website, and to more directed efforts in support of municipalities through training workshops, participation in public meetings, preparation of brochures and handouts as requested by towns. Some of these specific actions are included in other tasks of this workplan.

In order to avoid redundancy of public outreach efforts in the face of diminishing funds and staff resources, the BBNEP relies on more the general public outreach of the Buzzards Bay Coalition¹. The Coalition will continue to undertake outreach and education activities highlighting the condition and state of Buzzards Bay, progress toward restoration and protection goals, and collaboration with the Buzzards Bay National Estuary Program in their activities. These activities include the July 2012 Swim Buzzards Bay, their annual meeting, press events, and various publications, including the annual report to their members. The annual swim consists of a 1.2-mile open water swim across outer New Bedford Harbor. It highlights the role a clean and healthy Buzzards Bay plays in the lives of watershed residents.

The Coalition will continue to maintain their website. The Coalition will also continue its advocacy efforts through their various programs.

Additionally, the Buzzards Bay Action Committee has expanded its efforts to include environmental education in local schools. They also provide relevant speakers to the members for their monthly meetings and host workshops for Mass CZM and the BBNEP.

Responsible Partners and Their Role(s):

The Buzzards Bay Coalition and the Buzzards Bay Action Committee are our principal partners, but we may partner with other organizations. The BBNEP may also periodically prepare newsletter articles for MCZM's Coastlines magazine. The BBAC promotes increased awareness in their municipalities intra town networking, and they are also attempting to create a school education program.

NEP Staff:

Principal Staff involved will be the BBNEP Executive Director, and other NEP staff as required.

Outputs/Products:

Coalition and Buzzards Bay NEP websites. Coalition newsletter, flyers, posters, press releases, and reports to their members and residents about actions to protect and restore Buzzards Bay. Improved Buzzards Bay NEP website information, brochures, and flyers.

Milestones:

Both the Coalition and Buzzards Bay Action Committee have established schedules to meet their own goals and guidelines and are not included in this work plan.

Budget:

The only section 320 fund costs are the BBNEP staff time.

¹ This strategy was agreed to as part of a 2005 Memorandum of Understanding between the Buzzards Bay NEP, Buzzards Bay Coalition, and the Buzzards Bay Action Committee.

Outcomes:

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: Many of the Coalition outreach efforts evolve around specific projects that may occur in the future. Unanticipated demands on staff time.

This task will principally support this CWA core program: 4) controlling non-point source pollution on a watershed basis, but may also indirectly support 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

Task 9 - CCMP Update Finalization.

CCMP/Work Plan Goal(s):

CCMP Actions: All.

Project/Activity Purpose and Description: (ongoing)

The Buzzards Bay National Estuary Program is in the process of finalizing the Buzzards Bay CCMP. Completion of the document has been delayed by insufficient staffing to complete the tasks. The final CCMP approval process will be defined by the NEP's Steering Committee.

Responsible Partners and Their Role(s):

MCZM, DEP, the Buzzards Bay Coalition, the Buzzards Bay Action Committee, the Executive Office of Energy and the Environment, and the US EPA will be key partners in the development and update of the new Buzzards Bay CCMP and Watershed Action Plan, but we may partner with other organizations, and the BBNEP may also periodically prepare newsletter articles for MCZM's Coastlines magazine.

NEP Staff:

The BBNEP Executive Director will be the lead NEP staff member, but all NEP staff will be involved.

Outputs/Products:

1. New draft action plans developed.
2. Action plans reviewed by agencies and BBAC.
3. Steering Committee meetings to review the updated actions and progress.

4. Public meetings to raise awareness of the new CCMP and its importance.
5. Finalization of the new CCMP by the state and EPA.

Milestones:

1. The BBNEP Steering Committee will meet in May 2012 and July 2012, and November 2012 to finalize the CCMP.
2. Public presentations on the new combined CCMP in the summer of 2012.
3. Document complete, published and posted by November 30, 2012.

Budget:

The only costs are BBNEP staff time, and we will complete the document in house. However, personnel in other agencies and organizations will contribute drafts of sections. No funds are available for contractual support for this project. The time commitment from other contributors is not included in our match estimates.

Outcomes:

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the new CCMP/WAP will be finalized that will contain town-specific and agency-specific recommendations to protect and restore water quality and living resources in the bay and surrounding watershed.

Pressures affecting outcomes: Time constraints on the NEP director or other staff are the principal pressures affecting progress on this task.

This task may directly or indirectly support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

Task 10 - Other Specialized Technical Assistance

CCMP/Work Plan Goals:

Various action plans including nitrogen management, stormwater management, land use planning, and open space protection.

Purpose and Description: (ongoing)

The Buzzards Bay Comprehensive Conservation and Management Plan (CCMP) is largely a non-regulatory document, with most recommendations directed toward municipalities because they have the greatest authority and capacity to address the growth related and non-point source pollution problems facing the bay and watershed. As a result, since completion of the CCMP, the focus of the Buzzards Bay National Estuary Program has been to provide technical assistance, and where feasible, financial assistance to towns in their efforts to implement the CCMP.

Because municipalities often lack adequate technical staff to develop or implement many of the recommendations contained in the CCMP, since 1992, the Buzzards Bay National Estuary Program has been providing essential and much needed specialized technical assistance to municipal boards. This technical assistance not only focuses on specific initiatives funded with NEP, state and federal funds, but a wide range of CCMP issues as well. This task includes items not included in the above tasks.

In 2012, the Bouchard Oil Spill NRDA Trustees requested participation by the Buzzards Bay NEP in the formulation of a restoration plan to target the use of several million dollars in NRDA settlement funds. The Buzzards Bay NEP expects to continue to participate in this effort through 2012-2013.

A major focus of the BBNEP during the past year was to participate with DEP on the technical review of Massachusetts Estuary Project (MEP) TMDL reports, including those outside the Buzzards Bay watershed. Our reviews focused on the clarity and consistency of the information contained in the reports, assumptions used in the model, and accuracy of the GIS data and spreadsheets in capturing what are the actual land uses and activities. These reviews involved appreciable time from both the Director and Administrative Assistant and affected the schedule of other tasks. This effort will continue in 2012 and 2013 at the request of DEP and the discretion of the Buzzards Bay NEP Steering Committee.

Responsible Partners and Their Role(s):

The Buzzards Bay Coalition, the BBAC, Buzzards Bay municipalities, other state and federal agencies.

NEP Staff:

All NEP staff work on these projects as needed or required.

Outputs/Products:

1. Provide specialized technical assistance to municipalities to promote low impact development, remediate stormwater discharges and adopt stormwater management strategies, promote better management of on-site septic systems and innovative wastewater systems; improve local wetlands and habitat protection, manage nitrogen loadings, prepare and adopt open space plans.
2. Identify new local actions needed to support the development of an updated Buzzards Bay CCMP and EEA Watershed Action Plan.
3. Encourage towns to take actions that both support the updated Buzzards Bay CCMP and EEA Watershed Action Plan.

4. Encourage towns to complete their Commonwealth Capital applications and to take environmental actions that will improve their score (e.g. adopting smart growth and low impact development policies and regulations).
5. Promote Low Impact Development and Smart Growth strategies and stormwater management in Buzzards Bay communities.
6. Help towns develop concepts, remediation strategies and help prepare grant applications to implement programs and projects to implement CCMP recommendations.
7. Promote better management of on-site wastewater systems and use of innovative technologies.
8. Help municipalities improve local wetlands and habitat protection through regulatory and non-regulatory approaches.

Milestones:

Depends on future projects that cannot be anticipated at this time.

Budget:

The only costs are BBNEP staff time.

Outcomes:

Short-term: Increased information availability for use by Buzzards Bay community leaders, environmental managers, scientific and education community, Commonwealth of Massachusetts, federal officials, and the general public to make better management decisions and actions related to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed.

Intermediate: The advancement in knowledge on the effects of nitrogen pollution and documentation of the condition of localized water quality throughout Buzzards Bay harbors in relation to nutrient loads from the watersheds.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: We provide technical assistance on a first come first serve basis and as allowed by available staff time.

This task may directly or indirectly support any of these CWA core program: 1) strengthening water quality standards, 2) improving water quality monitoring, 3) developing total maximum daily loads, 4) controlling non-point source pollution on a watershed basis, 5) strengthening National Pollutant Discharge Elimination System permits, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

Task 11 - Technology Transfer to Other Estuaries

CCMP/Work Plan Goal(s):

All CCMP actions to some degree.

Project/Activity Purpose and Description: (ongoing)

The BBNEP director anticipates attending both the spring and fall NEP national meeting. The

US EPA requires NEP attendance at out-of-state conferences, particularly the spring and fall National Estuary Program meetings. Because of financial limitations, only the NEP director will attend these meetings. The EPA imposes an annual meeting attendance requirement to the BBNEP and for the Buzzards Bay Coalition as a condition for receipt of funding for the citizen monitoring program in their grant with the US EPA.

As part of the funding to the Coalition for water quality monitoring, the Coalition monitoring director will attend a national water quality meeting.

The BBNEP director has also agreed to participate in Waquoit Bay National Estuarine Research Reserve Research Advisory Committee to help this NOAA sister program update its management plan.

Other meeting attended as required or by invitation.

Responsible Partners and Their Role(s):

The Buzzards Bay Coalition and the BBNEP send the appropriate staff to these meetings.

NEP Staff:

The BBNEP Executive Director or his designee will attend spring and fall NEP meetings. Other NEP staff may attend meetings as required by the Executive Director.

Outputs/Products:

1. Attendance at NEP meetings.
2. Presentations at out of state meetings.
3. Information transfer to Buzzards Bay communities.
4. Informational materials to area legislators.

Milestones:

Attendance of fall 2012 and spring 2013 EPA-NEP meetings at a minimum. Staff may also attend other national conventions (on planning, wetlands, and stormwater as budget, availability, and staff time allows.)

Budget:

The travel budget (\$3,698) covers all out of state meeting expenses, as well as all in-state travel of staff.

Outcomes:

Short-term: Information and lessons from Buzzards Bay transferred to other entities.

Intermediate: Increased involvement of citizens to protect the natural resources of Buzzards Bay by actively empowering people to get involved and make a difference in the sound management and restoration of the Bay's resources.

Long-term: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Pressures affecting outcomes: Unanticipated budget shortfalls can require elimination of out-of-state travel.

This task does not directly support any CWA core programs.

Task 12 - Website Maintenance and Innovation

CCMP/Work Plan Goal(s):

Supports all activities, in particular outreach and education components.

Project/Activity Purpose and Description:

The Buzzards Bay National Estuary Program shall continue to maintain an independent website to assist the BBNEP to promote new approaches, receive feedback, communicate successes, track trends in water quality, performance of government in implementing the CCMP, express the views and concerns of the NEP Steering Committee, create a forum for new initiatives and ideas of our partners, and support other obligations and tasks identified in this work plan. The website is also used to post results of the bay indicators and documents relating to the oil spill, and post procurement notices and grant announcements. The BBNEP has also been systematically scanning all old BBNEP reports and gray literature related to Buzzards Bay and posting it on our website.

Principal Staff involved in these tasks:

Executive Director, Administrative Assistant.

Responsible Partners and Their Role(s):

The BBNEP coordinates with the Buzzards Bay Coalition to ensure that each of our indicator and tracking pages are consistent where we provide overlapping information.

NEP Staff:

The BBNEP Executive Director is the web master and principal author of the website. Administrative assistant does much of the updating of data. Other NEP staff contributes to the site with specific documents and materials, and review.

Outputs/Products:

1. Posting of new web pages and documents.
2. Update of existing web pages.
3. Modify all pages and documents to meet state and federal requirements for Accessibility of the site for those with disabilities including W3C, WAI, and Section 508 compliance.

Milestones:

Updates and postings as need or required.

Budget:

The only costs are BBNEP staff time.

Outcomes:

Short-term: Improved public and governmental understanding of Buzzards Bay environmental issues, increased productivity of partners needing information or Buzzards Bay documents, and increased public and financial support for action to protect and restore Buzzards Bay.

Intermediate: Increased citizen and government actions to protect and restore water quality and living resources in Buzzards Bay and its surrounding watershed through the implementation of the Buzzards Bay Comprehensive Conservation and Management Plan.

Long-term: Assists in advancing all CCMP goals

Pressures affecting outcomes: creation of new pages limited by time availability of the Executive Director (webmaster) to add new information and links.

This task does not directly support any CWA core programs but may indirectly 2) improving water quality monitoring, 4) controlling non-point source pollution on a watershed basis, 6) supporting sustainable wastewater infrastructure and CWA and state wetland protection efforts.

Task 13 - Climate Change Vulnerability and Adaptation

CCMP/Work Plan Goal(s):

Supports principally the shifting shorelines action plan and a strongly encouraged FY12 funding guidance element.

Project/Activity Purpose and Description:

The Buzzards Bay National Estuary Program will utilize LIDAR data released in 2009 and 2012 to evaluate high priority sites in the Atlas of Salt Marsh Tidal Restrictions in Buzzards Bay. Several large unaltered salt marshes will also be evaluated for likely patterns of salt marsh migration. More specifically, the Buzzards Bay NEP will use the lidar to evaluate the existing salt marsh elevations identified in the Massachusetts Wetland Conservancy maps, and add to the data one and two foot elevations to illustrate the likely inland migration of salt marshes with sea level rise. This data can be used by towns, and the state wetland restoration program to identify and prioritize restoration sites that will meet the goals of climate adaption. Towns can also use this information to target land acquisitions, or the removal of wetlands fill and anthropogenic obstructions that will impede inland migration of salt marshes. Maps will be prepared, and salt marsh area expansion will be calculated. Figure 11 illustrates what one of map product would look like.

This task will require approval of a QAPP for the use and analysis of secondary data, and the BBNEP will prepare the QAPP

Principal Staff involved in these tasks:

Executive Director, Regional Planner, Administrative Assistant.

Responsible Partners and Their Role(s): The BBNEP will coordinate with MCZM in its broader efforts under StormSmart coasts to avoid duplication of effort. The BBNEP will also coordinate with the BBAC on the watershed effort and with the selected community for the pilot project.

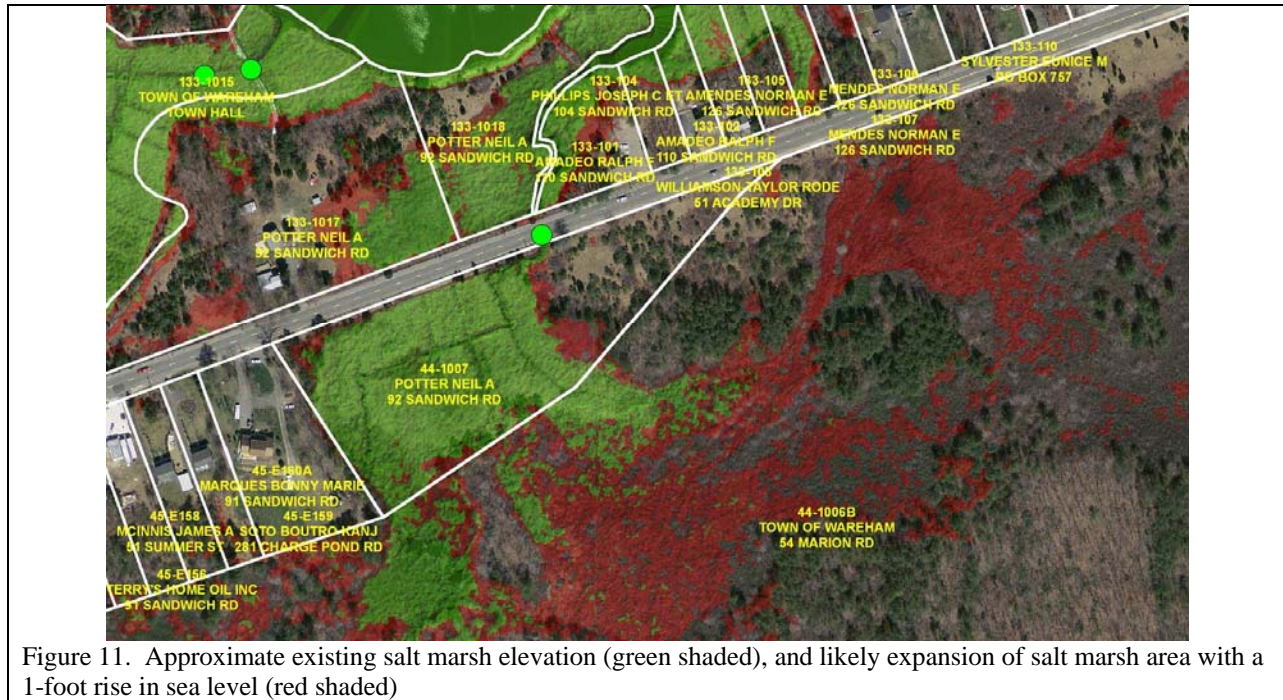


Figure 11. Approximate existing salt marsh elevation (green shaded), and likely expansion of salt marsh area with a 1-foot rise in sea level (red shaded)

NEP Staff:

The BBNEP Wetland Specialist will be the lead on the GIS analysis, the regional planner will help prepare the report, and the Executive Director will post information on line,. The Administrative Assistant will act as a liaison in gathering necessary data, and assist in report preparation.

Outputs/Products:

1. Development of QAPP in support of this task
2. Posting of new web pages, maps and GIS showing LIDAR maps of salt marsh inundation zones.

Milestones:

Begin developing QAPP in December 2012. Begin the inundation evaluation in March 2013. Draft project report issued in July 2013.

Budget:

The only costs are those of BBNEP staff time.

Outcomes:

Short-term: Improved public and governmental understanding of the vulnerabilities of Buzzards Bay to sea level rise through maps and GIS data, and to understand likely tidal inundation zones for planning and adaptation.

Intermediate: This information can assist towns to develop adaptation strategies and plan for habitat restoration and land acquisitions.

Long-term: Assists in advancing the goals contained in the Shifting Shoreline Action Plan.

Pressures affecting outcomes: time limitations due to other projects and unanticipated new tasks.

This task supports CWA wetland restoration goals and also supports the agency's overall goals for all levels of government to develop adaption strategies to address climate change and sea level rise, and planning for adaptation.

Section 4: Budget Detail and Explanation

This workplan is an amendment to the existing Cooperative agreement, and the previous three-year cooperative agreement will be closed out after the ongoing municipal grants and other tasks are closed out. The new budget is summarized according to these EPA grant categories.

Table 4. Summary of expenditures by EPA Grant category

EPA Category Summary	FY2012
Separate COOP: Coalition WQ Testing	\$25,000
Personnel	\$277,628
Fringe	\$80,762
Contractual: NRCS Stormwater Staff	\$40,000
Contractual: Municipal Grants Stormwater	\$20,000
Other: Municipal Grants non-stormwater	\$51,550
Other: Rent, cleaning, State Fees	\$34,679
Supplies	\$3,316
Travel	\$3,698
Indirect	\$60,567
TOTAL	\$597,200

Federal FY11 Funds Budget Notes

Personnel

The FY12 budget is summarized in the table and pie chart in Figure 12. Personnel costs are based on the following staffing levels: Executive Director- full time, Administrative Assistant-4/5 time; Regional Planner- 3/4 time; Wetland Specialist: full time.

WQ Testing

The Buzzards Bay Coalition WQ monitoring funding (\$25,000) is not included in this Cooperative Agreement, but will be provided to The Coalition under a separate agreement.

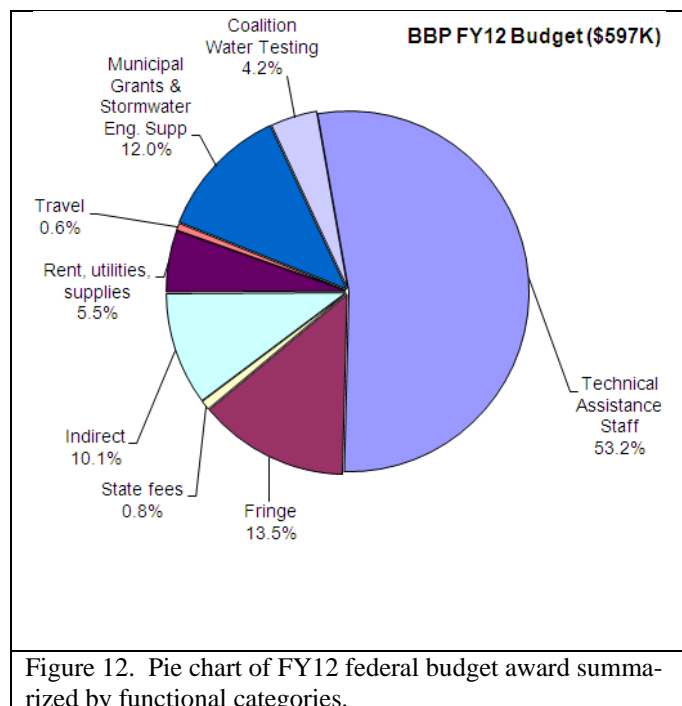


Figure 12. Pie chart of FY12 federal budget award summarized by functional categories.

Section 5: Match to the Cooperative Agreement

Below is a summary of the \$573,200 match that is being provided to meet the match requirement under this Cooperative Agreement to the Commonwealth (\$572,200 required). The largest portion of the match is provided by the Buzzards Bay Coalition programs followed by the municipal grant program. The Buzzards Bay Coalition, which last year had an operational budget of over \$1.4 million, works in a close partnership with the Buzzards Bay NEP on a number of tasks, including application of the water quality testing program, and work in support of wetland and habitat protection and restoration. The Buzzards Bay Coalition also provides a vital role in assisting communities to develop applications to the Buzzards Bay municipal grant program. Another important contributor to the match total are the cash and in kind and cash contributions from the member communities of the Buzzards Bay Action Committee. These collaborations have led to a very high rate of leveraging in our municipal grant program continues to represent one of the core of the match to our cooperative agreement.

1) Buzzards Bay Coalition Water Quality Monitoring Program (\$157,902).

For the past decade, the Coalition secured nonfederal funds through grants, member's dues, state earmarks, and donations to support its water quality monitoring program and related outreach.

The cost of the core elements of this program (staff, publications, contractual laboratory testing services, and supplies) approaches \$180,000 per year. The core program elements plus the volunteer time increases the value of the program to more than \$250,000. We have estimated this volunteer time at \$89,172 and is based on \$26.84/hr² x 121 volunteers x 28 hours per season which is underestimate since most volunteers contribute 40 hours per year.

Our match under this agreement (\$157,902) includes these specific expenditures of the program: a small portion (\$2,000) of the director of monitoring salary which is not used as match to the companion grant, contractual laboratory analyses and volunteer estimate (\$140,616), other (\$1,880), supplies (\$9,052), and travel (\$4,354).

The match to the Buzzards Bay Coalition's separate \$25,000 award will be met by an equal portion of the salary of the Buzzards Bay Coalition's director of monitoring which totals \$52,000.

2) Municipal support to BBAC (\$10,400).

The municipalities of Buzzards Bay pay \$10,400 per year to the Buzzards Bay Action Committee to support projects to implement the Buzzards Bay CCMP. These funds pay the costs of a part-time Executive Director, defray organization costs, helped fund a school education pilot program, and pay for meeting and workshop expenses.

3) BBAC, CCMP, and workshop meetings (\$14,300).

The BBAC is composed of high level municipal officials, generally Selectmen, Town Administrators, or Department heads that meet monthly (12 municipalities, about 10 officials typically attend, at 8 meetings per year for 2 hours per meeting. The average hourly rate assigned to these municipal officials is estimated to be \$65 per hour.

In addition to these meetings, the Buzzards Bay NEP will hold workshops and CCMP develop-

ment meetings, as part of BBAC meetings, or special meetings that will include town officials. We expect on average 20 municipal officials (excluding consultants or private citizens that may also attend these meetings). At least 2 of these meetings will be held, primarily in the summer and fall of 2009, and in partnership with MCZM. These municipal official contributions will also be valued at \$65 per hour.

The purpose of these meetings is to discuss CCMP implementation, specific progress on projects, and coordination with the Buzzards Bay National Estuary Program and Buzzards Bay Coalition. In the coming year, time will be set aside at each BBAC meeting to discuss an action plan topic as part of the planned re-write of the CCMP. The BBNEP conservatively estimates a minimum of \$14,300 match from these activities.

4) Municipal Match to BBNEP grants (\$287,000).

The BBNEP mini-grant program generates a minimum required match because the project requires a 25% match of total project cost (=33% of award). However, because match is a selection factor in the granting project, and because land acquisition projects often exceed the required match by multiple factors, we expect to easily achieve a match of \$287,000.

5) Other Coalition support: education programs and land conservation programs (\$103,598).

The Buzzards Bay Coalition's annual operational budget exceeds \$1.4 million and includes a wide range of activities that compliment this work plan. These activities include public education and outreach initiatives and publications, water quality data management updates for their website, in-stream monitoring program, oil spill area contingency plan updates with municipal officials, newsletters and events that include the cost of Director, outreach staff, and communication costs. The applicable matching amounts support and coincide with the BBNEP tasks identified in this work plan.

The Coalition also has vigorous land protection program to encourage Bay-focused watershed land protection, empower local land trusts, and educate private landowners about land conservation options. These efforts are supported by foundation and donor-supported programs, and include several staff members and has outreach costs. Expenditures under this program by The Coalition, especially land acquisition, continue to represent a large portion of this non-profit's expenditures. The activities support a key goal of the Buzzards Bay CCMP, the protection of wetlands, habitat, and open space to protect water quality, and living resources. Publicly accessible open space also helps build support for other environmental initiatives of both our programs. Coalition works with landowners, land trusts and town officials to encourage Bay-focused watershed land protection, empower local land trusts, and educate private landowners about land conservation options.

The Buzzards Bay National Estuary Program is a key partner with the Coalition, preparing hundreds of maps and conducting GIS land use evaluations for targeted acquisitions. Our support is integral in the Coalition's outreach for their program, and has helped the passage of municipal town meeting legislative articles in support of conservation land acquisitions.

The Coalition will provide a portion of 5 staff salaries from the land and watershed protection

and education programs as well as travel expenses as match.

Proposed MATCH (Non-State)	Total	Personnel	Fringe	Contractual	Other	Supplies	Travel	Indirect	Total
1. Coalition WQ Monitoring Program	\$157,902	\$2,000(1)		\$140,616(1)	\$1,880	\$9,052	\$4,354		\$157,902
2. BBAC dues	\$10,400			\$9,400		\$1,000			\$10,400
3. BBAC, other municipal meetings, workshops	\$14,300	\$14,300							\$14,300
4. match to BBNEP minigrants	\$287,000				\$287,000				\$287,000
5. Coalition education and land conservation programs (2)	\$103,598	\$101,898					\$1,700		\$103,598
Summary	\$573,200	\$118,198	\$0	\$150,016	\$288,880	\$10,052	\$6,054	\$0	\$573,200
local (municipal, NGO total)	\$573,200								

Footnote 1: The value of personnel is based on that portion of the salary of the water quality monitoring coordinator (\$52,000) not used as match to the companion grant (\$25,000). Contractual are costs related to the laboratory services for the water quality testing program (\$51,444), plus the value of volunteers (\$89,172). The value of volunteers is based on 121 volunteers x \$26.84 (see http://www.independentsector.org/programs/research/volunteer_time.html) x 28 hours per season. This represents an underestimate of CBB volunteer time. We estimate actual average time per volunteer as more than 40 hours per year with retraining and samplings times for participants in the regular monitoring program (22 oxygen samplings and 4 nutrient samplings), but as little as 6 hours per year for a minority of volunteers who sample only the four nutrient dates. Travel includes both in-state and out-of-state estimated reimbursements. Supplies includes chemicals, replacement and new test kits, sampling devices and repairs, handheld monitoring devices, and a wide range of support materials related to the operation of the program. Other includes postage, printing, and program insurance.

Footnote 2: Portions of Buzzards Bay Coalition Staff in these positions: VP Education & Public Engagement (\$55,000) VP Watershed Protection (\$50,000), Director of Land Protection (\$40,000), Communications Specialist (\$40,000), Land Protection and Stewardship Specialist (\$49,000), and Restoration Specialist (\$45,000) are used to for NEP match..

Section 6: Reprogramming of FY11 Funds:

This year's amendment to the cooperative agreement includes the reallocation of funds in the fringe benefit and indirect category due to a rate reduction for FY 11 (see Table 7). The workplan and budget as submitted had a fringe rate of 35.16%. The 2011 fringe rate was reduced to 34.92%, the indirect rate was 25.93% and was reduced to 20.05%. These reductions resulted in a savings of \$13,491 and these funds will be applied to the next round of minigrants.

The current (FY12) indirect rate is 20.05% which may be renegotiated at a later date.

The current (FY12) fringe rate is 29.09%.

Table 7. Reallocation of Funds from FY11				
EPA categories	FY11 original	reprogram	FY11 New	Comments
Personnel	\$255,145	\$2,298	\$257,443	FY11: contract step approved.
Fringe	\$89,709	\$190	\$89,899	The fringe rate was reduced from 35.16% to 34.92%.
Contractual- NRCS	\$40,000	\$0	\$40,000	
Municipal Grants- Storm-water	\$20,000	\$0	\$20,000	
Municipal Grants- Non-Stormwater	\$55,678	\$13,491	\$69,169	Excess funds redirected to municipal grants.
Other - program costs	\$33,650	\$0	\$33,650	
Supplies	\$2,419	\$0	\$2,419	
Travel	\$4,700	\$0	\$4,700	
Indirect	\$72,499	(\$15,979)	\$56,520	The indirect rate was reduced 25.93% to 20.05%.
Redirect to CBB Grant	\$25,000	\$0	\$25,000	
TOTAL Federal Funding	\$598,800	\$0	\$598,800	

Section 7: Buzzards Bay NEP Staff

Dr. Joe Costa is Executive Director of the Buzzards Bay NEP. Besides overseeing and administering the Program, he provides technical assistance on nitrogen loading assessment and management, water quality analysis, watershed planning, build-out analysis, data analysis, and software support. His research in Marine Ecology, particularly nitrogen loading effects on eelgrass beds and coastal ecosystems has been put to use in the Coalition's citizen monitoring program and the NEP's nitrogen management approach. The director is also the program's webmaster.

John Rockwell did a Master's thesis on wetlands delineation techniques, and as a former conservation agent, conservation commission chair, and MACC board member, he brings with him a wealth of experience on wetland protection. John conducts workshops, drafts bylaws, and conducts wetland delineations for towns.

Bernadette Taber is an employee of the USDA Natural Resource Conservation Service and has been detailed to the Buzzards Bay National Estuary Program office since 1991. She evaluates and develops engineering solutions for stormwater remediation in both agricultural and urban environments. She has reviewed many engineering plans at the request of Buzzards Bay municipalities, and has also developed the preliminary designs identified in many Buzzards Bay National Estuary Program and town grant proposals.

Tracy Warncke is the Buzzards Bay NEP's Administrative Assistant (4/5 time). She not only handles administrative duties including federal grant administration at the Buzzards Bay National Estuary Program office and updates data for the website, but also has designed many reports, brochures, and fact sheets for the NEP and municipalities alike. Tracy spent four years with the Bourne Board of Health testing water for fecal coliform bacteria, experience she has put to work at the BBNEP.

Sarah Williams is the NEP's Regional Planner (3/4 time). She provides assistance to municipalities on land use and watershed planning, land conservation, buildout analysis, habitat restoration, and mapping. She is a coordinator between the towns and the Buzzards Bay National Estuary Program on our Municipal Grant Program, and is preparing the NEP's regional open space plan. Sarah was also a former member of the Fairhaven-Acushnet Land Preservation Trust and Fairhaven Conservation Commission, and brings this valuable experience to bear on her activities.

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